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PROFESSIONAL WOMEN AND MINORITIES

A Manpower Data Resource Service

Sixth Edition

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FOREWORD

This book is designed to provide current and historical statistics about the professional segment of the U.S. population and particularly the participation and availability of women and minorities in those areas which generally require formal education to at least the baccalaureate level. Because more information is available in some fields than in others, the comprehensiveness of coverage varies. While we have attempted to locate all available data sources, and to provide the most current statistics available, we welcome notification of any data that we may have missed. Between annual editions, new data are published regularly in MANPOWER COMMENTS, a periodical digest available from the Commission on Professionals in Science and Technology.

We wish to thank those professional associations, women's groups and individuals who have responded to our request for current information or data, and for their permission to use that data in this compilation. We also express our appreciation to the more than 2,000 users of the earlier editions for their continued interest in the data both to measure their progress and to formulate plans.

Our special thanks go to the Ford Foundation for a grant which supported the final six months of work in collecting, assembling, reviewing and publishing the first edition of this book in 1975. Without that first edition, this continuing data source would not have been possible. We also acknowledge with thanks the special assistance of Richard Vetter and Barbara Willard.

Betty M. Vetter and Eleanor L. Babco

INTRODUCTION

Organization of the Book

The data tables are organized in ten chapters, and tables are numbered consecutively within each chapter.

The Table of Contents outlines both the chapter arrangement and the organization of tables within the chapter. The first five chapters on general enrollments, general degrees, general professions, general workforce and academic workforce include both tables which do not specify subject fields and tables where several subject fields are included. In the section on general professions, data for individual professions such as business administration and law follow tables that include data for multiple fields.

The organization of tables in chapters six through ten, which are devoted to subject fields, provide data on degrees (doctorates first) followed by enrollments, general workforce, academic workforce and federal workforce participation. Except for tables which include both sex and minority proportions, those which delineate the population by sex generally precede those which delineate by minority status.

When the field is designated at the top of the page, table headings do not necessarily include the name of the field.

When the year or years covered by the table are included within the table, the dates are not always repeated in the table title.

The **Index** is by page number. The index, rather than the Table of Contents, is the place to begin a search for data in a particular field, since enrollment, degree and employment information about that field will also be found in the early chapters. Cross-indexing allows finding the data references in a number of ways.

The source or sources of data for each table are noted above the table. The bibliography, organized alphabetically by publisher, provides specific information about each source.

An annotated list of Recruitment Resources is arranged alphabetically for sources pertaining to specific disciplines, followed by rosters with general or multifield coverage.

The Data

More than 200 published and previously unpublished data sources were used to prepare the statistical tables and charts in this book, including reports and other materials from government agencies, professional associations and women's and/or minority groups and caucuses. The source or sources for each table appear at the top of the table, with the full bibliographic entry provided in the Bibliography.

Generally, exact correlation of results of different surveys is not possible since it is rare to find two data sources with exactly the same time and population base. Different results occur because of differences in the survey populations, in the time frames, in the way similar questions were asked, in terminology, in analysis, or in the type of respondent. For example, degree data collected by the National Center for Education Statistics is obtained from college and university registrars, while that collected by the professional societies generally comes from department heads and that collected by the National Research Council comes from the doctorate recipients themselves. Thus, while degree data will be similar, it is not identical from one source to another, usually because of differences in field taxonomy.

Different methods of analysis, particularly in data on minorities, also will produce different statistical results. The several problems for the data analyst include the method of treatment for non-respondents, the respondents who list multiple minority status, responses from a third party rather than from the individuals themselves, inclusion or exclusion of non-citizens in the survey population or unrepresentative population samples.

Differences in treatment of non-respondents to questions of sex or ethnicity may produce large statistical differences in calculating the proportion of minorities or women within a particular population.

Some surveys assume that non-respondents to the sex or ethnic question are in the same proportion as respondents, and remove all non-respondents before calculating the percentages of women and minority participants. Still others calculate percentages from a total which includes non-respondents, thus giving a lower percentage for minorities than may be the case. Additionally, many studies dealing with minority populations do not separate foreign nationals from U.S. citizens or those eligible for citizenship. This single factor, particularly within the Asian minority among scientists and engineers, changes the sex and minority proportion substantially, as does the inclusion of foreign nationals in the base numbers for enrollments and degrees in such graduate fields as engineering. This edition includes more data than were previously available on citizenship, particularly in the science and engineering fields.

In most data sets, minority data are not subdivided by sex, and conversely data on women fail to distinguish majority from minority women. Thus, the availability of minority women in specific fields is often difficult to determine. Where available, we have included both the sex and minority subdivision. Included again in this edition are data from the 1980 Census Special EEO File, which provides both sex and race/ethnicity breakouts by occupation.

This book does not attempt to determine which data are more likely to be correct when differences occur, but when available, the population base used for calculating the percentages is indicated in the table title or footnotes.

Correlating Degree and Workforce Data

There are frequently fairly major differences between the proportions of degrees granted to women and minorities in any particular field and the proportions of those persons found in the workforce for that field. This may occur because of field switching, differences in nomenclature between degree fields and job titles, and because of the problems of similar but non-identical population bases outlined above. The lower proportion of women in a working population than their proportion of earned degrees may also indicate that proportionally more women than men have left the workforce in that field either temporarily or permanently. Some data sets show that women are somewhat less likely than men to find employment that is linked with their major field of study, particularly among recent graduates. Tables showing underemployment are included.

Few data are available on the workforce participation of women and minorities in the arts, humanities and education. One reason is that persons with degrees in those fields may appear in almost any occupation in the workforce, and are generally classed in the same field as the degree field only when they are in the academic workforce.

In many instances, this book incorporates both historical and current data so that progress may be measured and changing trend lines incorporated in planning for the future. In some cases, we have included older data because nothing more current could be obtained. However, in this edition, we have dropped most tables where the most recent data available are for 1980 or earlier.

Through the wording of table headings and the use of footnotes to tables, we have tried to offer as much information as possible regarding the inclusiveness of the data in any table. Usually a more comprehensive explanation of methodology can be found in the original data source which is listed in the Bibliography. A single source for much of the information is Guide to Data on Scientists and Engineers, (Scientific Manpower Commission, 1984), available in all university libraries. Research groups or other libraries may request a copy from the Commission on Professionals in Science and Technology.

Terminology for Minority Groups

Only in the past few years has a common set of designations for minority populations come into general use. In this book, tables generally use the terminology of the original source from which the table was derived.

AFFIRMATIVE ACTION

Federal laws and regulations prohibit discrimination in conditions of employment including recruitment, hiring, lay-off, discharge and recall, and in-service training; opportunities for promotion; participation in training programs; wages and salaries; sick leave time and pay; vacation time and pay; over-time work and pay; medical, hospital, life and accident insurance; and optional and compulsory retirement.

Statutes and Orders Requiring Equal Employment Opportunity and Affirmative Action

The Equal Pay Act of 1963, the first sex discrimination legislation enacted, requires equal pay for equal work regardless of sex. Title IX of the Education Amendments Act of 1972 extends the coverage to executive, administrative and professional employees, including all faculty; and to outside sales people.

Executive Order 11246 as amended by Executive Orders 11375 and 12086 prohibits discrimination in employment by all employers who hold federal contracts, and requires affirmative action programs by all federal contractors and sub-contractors. Firms with contracts over $100,000 and with 100 or more employees must develop and implement written programs of affirmative action. At press time, the Administration is considering changes in this Executive Order.

Title VI of the Civil Rights Act of 1964 forbids discrimination against students on the basis of race, color, or national origin in all federally assisted programs. Employment is not generally covered except when employment is the purpose of the assistance.

Title VII of the Civil Rights Act of 1964 as amended by the Equal Employment Opportunity Act of 1972 forbids discrimination on the basis of race, color, national origin, religion or sex in any term, condition of privilege of employment, including sexual harassment, by unions, employment agencies and employers. The law was amended on March 24, 1972 to cover all public and private educational institutions, as well as state and local governments. It applies to all employers, public or private, whether or not they recieve any federal funds. Title VII covers all private employers of fifteen or more persons.

Title IX of the Education Amendments of 1972 forbids discrimination on the basis of sex in all federally assisted education programs in all institutions, public and private, that receive federal monies through grants, loans or contracts. The Supreme Court determined in the Spring of 1982 that Title IX's prohibition of sex discrimination applies to both students and employees of educational institutions. Title IX Regulations have been applied broadly to activities "assisted or benefited by federal funds," but the Supreme Court ruled in March 1984 that Title IX applies only to programs or activities that receive direct federal support, rather than to entire institutions. What constitutes a "program" or "activity" was not addressed. Legislation has been introduced in both the House and Senate to apply Title IX to all activities, education programs and educational institutions; and also would broaden the coverage of Title VI of the Civil Rights Act of 1964 and Section 504 of the Vocational Rehabilitation Act.

Section 504 of the Vocational Rehabilitation Act of 1973 prohibits discrimination against handicapped persons by federal contractors, and requires such contractors to take affirmative action to employ such persons.

Regulation and Enforcement

Prior to 1978, a number of federal agencies were variously responsible for writing regulations to govern these orders and statutes and to enforce the regulations. These agencies included the Labor Department, the Justice Department, the Department of Health, Education and Welfare, and the Equal Employment Opportunity Commission which is appointed by the President.

On February 23, 1978, President Carter submitted to Congress a plan to reorganize federal equal employment opportunity enforcement activities. EEOC is the principal agency responsible for enforcement for all public and private non-federal employers and unions, and within the federal government. EEOC took over from the Labor Department on July 1, 1979 enforcement of the Equal Pay Act and the Age Discrimination Act.

Enforcement of Executive Order 11246 as amended by Executive Order 12086 and Executive Order 11375 remains with the Office of Federal Contract Compliance Programs (OFCCP) in the Department of Labor. All federal contractors deal with OFCCP.

The Justice Department continues to have responsibility for litigation against state and local governments under Title VII, and represents the government in suits against federal contractors. The Attorney General may initiate "pattern and practice" suits under Title VII in the public sector.

The Department of Education enforces compliance with Title IX. New regulations following the Supreme Court decision to limit Title IX to specific programs or activities receiving federal funds are not yet published.

EEOC, the Justice Department and the Labor Department published final regulations for uniform employment guidelines which became effective September 25, 1978. The regulations are published as Part IV in the August 25, 1978 issue of the Federal Register. New regulations based on the amended Executive Order eliminate pre-contract award compliance review, and limit suits to "identifiable victims of bias" rather than allowing broad, class action suits for unnamed individuals who might have been affected.

What is Affirmative Action?

Broadly speaking, affirmative action consists of actions to end discrimination and to remedy the effects of past discrimination. It includes such activities as notifying women's and minority groups about job openings, advertising job openings rather than relying on word-of-mouth notification, developing recruitment procedures aimed at women and minorities as well as other qualified applicants, and providing equal opportunities for advancement.

Affirmative Action under Executive Order 11246 also requires establishment of an Affirmative Action Plan which includes numerical goals and time tables for increasing the participation of women and/or minorities.

Goals are targets for the inclusion of people previously excluded, and are an attempt to estimate the composition of the employer's workforce if there were no illegal discrimination based on race or sex. In general, goals for professional positions are aligned with the number or percentage of qualified women or minorities available rather than with their general representation within the population.

Quotas, on the other hand, are illegal unless assigned by a court as the result of a finding of discrimination, since they are in themselves discriminatory and act to keep some qualified people out of the applicant pool to be considered.

Under the Executive Order, all job classifications must be reviewed in order to identify under-utilization of women and minorities. Data should be provided simultaneously on race and sex. If current recruitment practices have resulted in a "significantly lower representation" of women and minorities in the applicant pool than would be expected from their availability in the labor force, then new sources of recruitment must be developed. An employer is assumed to be utilizing "reasonable" numbers of persons in protected classes if his workforce includes at least 80 percent of their representation within the eligible populations.

Affirmative action plans are required to include a system of accountability and monitoring. This system may be centralized in an institution-wide or a corporation-wide office which maintains records and monitors individual units or departments and makes an annual report; or in individual units or departments which may maintain records separately of all applicants and hires as well as records of the efforts made to recruit women and minorities. In either case, records should allow for an ongoing analysis of all employment decisions in recruiting, hiring, promoting and setting salaries.

The employer sets the criteria for every job, both in terms of the level of academic preparation required, experience and other factors. The criteria must be applied equally to men and women and to those of all ethnic backgrounds. They must be clearly related to the job to be filled, and they must not in themselves be discriminatory. For example, criteria which gave preference to the hiring of persons who did their undergraduate work at an Ivy League School would be discriminatory in that women, have, until recently, been denied the opportunity to attend such institutions.

The Uniform Guidelines on Employee Selection Procedures protect the rights of workers to be hired and promoted on the basis of job-related standards and without regard to race, sex or national origin. These guidelines apply to all employers, public and private, including academic institutions. Their underlying principle is that tests and other selection procedures that have an adverse impact on minorities and women are illegal unless validated by showing a clear relation between performance on the test and performance on the job. The guidelines adopt a "rule of thumb" as a practical but not absolute, means of determining whether there has been an adverse impact. Generally, a selection rate for any race, sex or ethnic group which is less than 80% of the rate for the group with the highest selection rate is regarded as adverse impact. For professional positions in which women or minorities represent less than 20% of the available pool, statistical evidence of such proportions will be necessary.

Evidence of the validity of a selection procedure generally is not required if there is no adverse impact. The guidelines provide that, in considering whether to take enforcement action, the government will take into account the general posture of the employer regarding equal employment opportunity, including its affirmative action plan and the results achieved under the plan.

Numerical goals have been upheld in the courts as relief for a substantiated pattern of discrimination. Each goal is tailor-made to a specific situation, taking into account expected turnover, vacancies, promotions and the availability of qualified women and minorities. The goal varies for different job classifications and may be general as for "chemists" or more specific as for "doctoral organic chemists."

If an institution fails to meet its goals, and if adverse impact on women or minorities is indicated by its results, that institution must show that it has made a good faith effort to recruit, hire and promote qualified women and minorities; and it must be able to produce records documenting these efforts. Such efforts may include contact with women's and minority groups or caucuses including those relevant to particular disciplines (see Recruitment Resources); contact with individual women or minority professionals for referral of candidates; evidence of evaluation of those women and minorities already employed who might qualify for the job openings; and letters to colleagues and job advertisements which indicate that the employer welcomes applications from all qualified candidates.

If the best qualified person is white and male, that person can be hired. However, if called upon to do so, the employer must be able to demonstrate that a genuine good faith effort has been made to recruit qualified women and minorities; that objective, job-related criteria were specified before the hiring process; and that these criteria have been applied equally to women, minorities and white men.

Some regulations issued during previous administrations are still under review, which may bring about changes in regulations outlined here.

CHAPTER 1

GENERAL ENROLLMENTS

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SOURCE: National Center for Health Statistics, Personal Communication

TABLE 1-1

LIVE BIRTHS IN THE U.S. BY SEX: 1933-1983

YEAR	TOTAL	MALE	FEMALE
1933	2,081,232	1,068,871	1,012,361
1934	2,167,636	1,112,703	1,054,933
1935	2,155,105	1,105,489	1,049,616
1936	2,144,790	1,099,465	1,045,325
1937	2,203,337	1,130,641	1,072,696
1938	2,286,962	1,172,541	1,114,421
1939	2,265,558	1,162,600	1,102,988
1940	2,360,399	1,211,684	1,148,715
1941	2,513,427	1,289,734	1,223,693
1942	2,808,996	1,444,365	1,364,631
1943	2,936,860	1,508,959	1,427,901
1944	2,794,800	1,435,301	1,359,499
1945	2,735,456	1,404,587	1,330,869
1946	3,288,672	1,691,220	1,597,452
1947	3,699,940	1,899,876	1,800,064
1948	3,535,068	1,813,852	1,721,216
1949	3,559,529	1,826,352	1,733,177
1950	3,554,149	1,823,555	1,730,594
1951	3,750,850	1,923,020	1,827,830
1952	3,846,986	1,971,262	1,875,724
1953	3,902,120	2,001,798	1,900,322
1954	4,017,362	2,059,068	1,958,294
1955	4,047,295	2,073,719	1,973,576
1956	4,163,090	2,133,588	2,029,502
1957	4,254,784	2,179,960	2,074,824
1958	4,203,812	2,152,546	2,051,266
1959	4,244,796	2,173,638	2,071,158
1960	4,257,850	2,179,708	2,078,142
1961	4,268,326	2,186,274	2,082,052
1962	4,167,362	2,132,466	2,034,896
1963	4,098,020	2,101,632	1,996,388
1964	4,027,490	2,060,162	1,967,328
1965	3,760,358	1,927,054	1,833,304
1966	3,606,274	1,845,862	1,760,412
1967	3,520,959	1,803,388	1,717,571
1968	3,501,564	1,796,326	1,705,238
1969	3,600,206	1,846,572	1,753,634
1970	3,731,386	1,915,378	1,816,008
1971	3,555,970	1,822,910	1,733,060
1972	3,258,411	1,669,927	1,588,484
1973	3,136,965	1,608,326	1,528,639
1974	3,159,958	1,622,114	1,537,844
1975	3,144,198	1,613,135	1,531,063
1976	3,167,788	1,624,436	1,543,352
1977	3,326,632	1,705,916	1,620,716
1978	3,333,279	1,709,394	1,623,885
1979	3,494,398	1,791,267	1,703,131
1980	3,612,258	1,852,616	1,759,642
1981	3,629,238	1,860,272	1,768,966
1982	3,680,537	1,885,676	1,794,861
1983	3,638,933	1,865,553	1,773,380

SOURCE: The Third National Mathematics Assessment Results, Trends, and Issues, National Assessment of Education Progress, Education Commission of the States, Report 13-MA-01, April 1983

TABLE 1-2

CHANGES IN MEAN PERFORMANCE ON THE MATHEMATICS ASSESSMENT, BY SEX AND RACIAL/ETHNIC GROUP, 1978-1982

Assessment component	Male			Female		
	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds
Overall Performance (1982)	55.8%	60.4%	61.6%	56.9%	60.6%	58.9%
Change (1978-82)	+0.5%	+4.0%[1]	-0.4%	+1.4%[1]	+3.7%[1]	+0.1%
Knowledge	67.4	73.8	75.9	69.3	73.8	73.9
Change	+1.0	+4.4[1]	0.0	+1.9[1]	+4.5[1]	+0.4
Skills	50.2	57.0	61.1	51.1	58.2	58.9
Change	+0.5	+4.2[1]	+0.2	+1.2	+3.8[1]	+0.4
Understanding	41.0	60.8	63.1	41.4	60.2	60.0
Change	-1.3	+4.2[1]	-1.0	+0.4	+3.7[1]	+0.2
Applications	40.0	46.1	44.6	39.2	45.1	40.2
Change	+0.4	+2.2[1]	-1.3	+0.6	+2.3[1]	-1.1

Race/ethnic group and age	Overall performance		Knowledge		Skills		Understanding		Applications	
	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)	Score (1982)	Change (1978-82)
Total										
9-year olds	56.4%	+1.0%	68.3%	+1.4%	50.6%	+0.8%	41.2%	-0.4%	39.6%	+0.5%
13-year olds	60.5	+3.9[1]	73.8	+4.5[1]	57.6	+4.0[1]	60.5	+3.9[1]	45.6	+2.2[1]
17-year olds	60.2	-0.2	74.9	+0.2	60.0	+0.3	61.5	-0.3	42.4	-1.1
White										
9-year olds	58.8	+0.7	70.8	+1.2	53.1	+0.6	43.4	-0.8	42.4	+0.6
13-year olds	63.1	+3.2[1]	76.1	+3.9[1]	60.4	+3.4[1]	63.6	+3.6[1]	47.9	+1.6[1]
17-year olds	63.1	-0.2	77.3	0.0	63.0	+0.3	64.7	-0.1	45.5	-1.0
Black										
9-year olds	45.2	+2.1	57.8	+3.5[1]	38.7	+1.6	31.4	+0.9	27.0	-0.6
13-year olds	48.2	+6.5[1]	63.8	+8.0[1]	44.0	+6.7[1]	46.4	+5.9[1]	34.8	+4.4[1]
17-year olds	45.0	+1.3	62.6	+3.0	44.2	+1.8	44.8	-0.2	26.0	-0.2
Hispanic										
9-year olds	47.7	+1.1	58.7	0.0	43.8	+2.5	32.4	-0.2	30.5	+0.6
13-year olds	51.9	+6.5[1]	65.3	+6.3[1]	49.2	+7.2[1]	49.7	+5.9[1]	38.8	+6.0[1]
17-year olds	49.4	+0.9	66.1	+2.0	48.4	+0.5	49.7	+0.8	31.4	+0.4

[1]Change is significant at 0.05 level.

SOURCE: Images of Science, Science Assessment and Research Project, University of Minnesota Research and Evaluation Center, June 1983.

TABLE 1-3

CHANGES IN MEAN PERFORMANCE ON THE SCIENCE ASSESSMENT BY SEX AND RACE, 1977-1982

Assessment component	Male			Female		
	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds
Inquiry						
Score (1982)	52.8%	58.5%	70.2%	52.5%	57.6%	69.1%
Change (1977-82)	-1.1%	-0.4%	-2.6%[2]	-0.9%	-0.8%	-2.4%[2]
Science-Technology-Society						
Score	60.5	59.5	68.6	59.4	55.3	65.4
Change	+3.1[2]	+0.9	-1.4	+2.6[2]	+0.3	+0.3
Content						
Score	(1)	54.7	62.7	(1)	50.2	56.9
Change		+0.3	-2.2[2]		-1.0	-1.7[2]
Attitude[3]						
Score	67.7	52.8	49.0	65.1	47.6	46.6
Change	-0.8	-2.2[2]	-0.9	-0.4	-2.6[2]	+2.7[2]

Assessment component	Males						Females					
	White			Black			White			Black		
	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds	9-year olds	13-year olds	17-year olds
Inquiry												
Score (1982)	55.9%	60.4%	72.8%	40.8%	48.8%	58.1%	55.3%	59.7%	71.6%	41.4%	49.3%	56.7
Change (1977-82)	-1.3%	-0.8%	-2.6%[2]	+3.4%	+0.6%	-0.1%	-1.7%	-1.1%	-2.5%[2]	+1.9%	+0.1%	-1.9%
Science-Technology-Society												
Score	62.7	61.5	71.2	50.7	50.1	55.8	61.3	57.4	67.8	51.7	46.8	54.1
Change	+3.0[2]	+0.7	-1.2	+4.4	+1.5	+0.3	+2.2	+0.4	+0.2	+4.3	-0.8	+2.0
Content												
Score	(1)	56.8	65.6	(1)	44.6	47.8	(1)	52.4	59.3	(1)	40.6	44.4
Change		-0.2	-1.7		+2.4	-1.8		-1.2	-1.6		-0.8	-1.3
Attitude[3]												
Score	68.6	52.6	48.0	64.1	53.8	53.8	66.2	47.0	45.4	61.4	50.0	54.5
Change	-1.1	-3.2[2]	-1.3	+1.4	+0.8	-0.4	-0.5	-2.6[2]	+3.0[2]	-0.2	-1.7	+2.0

[1]Not administered at 9-year old level.
[2]Change is significant at the 0.05 level.
[3]For 13- and 17-year olds, "attitude" refers only to "attitudes toward science classes"

SOURCE: Projections of Education Statistics to 1986-87, NCES 78-403; Projections of Educational Statistics to 1992-93, NCES 85-408; and Digest of Education Statistics 1983-84, NCES 83-407, National Center for Education Statistics

TABLE 1-4

HIGH SCHOOL GRADUATES IN THE UNITED STATES, 1954-55 - 1992-93

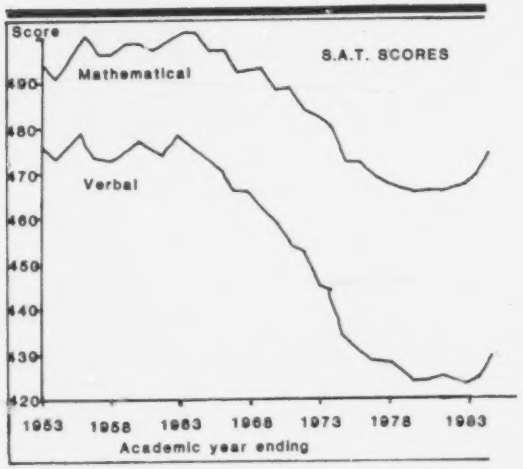
YEAR	Total High School Graduates[1]	SEX	
		Boys	Girls
1954-55	1,351,000	648,000	703,000
1955-56	1,414,800	679,500	735,300
1956-57	1,446,000	696,000	750,000
1957-58	1,505,900	725,500	780,400
1958-59	1,639,000	790,000	849,000
1959-60	1,864,000	898,000	966,000
1960-61	1,971,000	958,000	1,013,000
1961-62	1,925,000	941,000	984,000
1962-63	1,950,000	959,000	991,000
1963-64	2,290,000	1,121,000	1,169,000
1964-65	2,665,000	1,314,000	1,351,000
1965-66	2,632,000	1,308,000	1,324,000
1966-67	2,679,000	1,332,000	1,348,000
1967-68	2,702,000	1,341,000	1,361,000
1968-69	2,829,000	1,402,000	1,427,000
1969-70	2,896,000	1,433,000	1,463,000
1970-71	2,937,000	1,454,000	1,438,000
1971-72	3,001,000	1,487,000	1,514,000
1972-73	3,036,000	1,500,000	1,536,000
1973-74	3,074,000	1,512,000	1,562,000
1974-75	3,133,000	1,542,000	1,591,000
1975-76	3,148,000	1,569,000	1,579,000
1976-77	3,154,000	1,547,000	1,607,000
1977-78	3,127,000	1,516,000	1,596,000
1978-79	3,101,000	1,491,000	1,585,000
1979-80	3,043,000	1,483,000	1,552,000
1980-81	3,020,000	1,474,000	1,537,000
1981-82	3,001,000	1,474,000	1,527,000
PROJECTED			
1982-83	2,916,000	1,451,000	1,465,000
1983-84	2,741,000	1,366,000	1,375,000
1984-85	2,656,000	1,321,000	1,335,000
1985-86	2,595,000	1,292,000	1,303,000
1986-87	2,663,000	1,326,000	1,337,000
1987-88	2,739,000	1,366,000	1,373,000
1988-89	2,742,000	1,368,000	1,374,000
1989-90	2,491,000	1,242,000	1,249,000
1990-91	2,408,000	1,200,000	1,208,000
1991-92	2,323,000	1,159,000	1,164,000
1992-93	2,378,000	1,187,000	1,191,000

[1] Includes both public and nonpublic schools.

SOURCE: Admissions Testing Program of the College Examination Entrance Board

TABLE 1-5

SCHOLASTIC APTITUDE TEST SCORES, BY SEX AND RACE/ETHNIC GROUP, 1953 - 1983



SAT SCORE AVERAGES FOR COLLEGE-BOUND SENIORS BY SEX, 1970-85

Year	VERBAL			MATHEMATICS		
	Male	Female	Total	Male	Female	Total
1970	459	461	460	509	465	488
1971	454	457	455	507	466	488
1972	454	452	453	505	461	484
1973	446	443	445	502	460	481
1974	447	442	444	501	459	480
1975	437	431	434	495	449	472
1976	433	430	431	497	446	472
1977	431	427	429	497	445	470
1978	433	425	429	494	444	468
1979	431	423	427	493	443	467
1980	428	420	424	491	443	466
1981	430	418	424	492	443	466
1982	431	421	426	493	443	467
1983	430	420	425	493	445	468
1984	433	420	426	495	449	471
1985	437	425	431	499	452	475

ETHNIC BACKGROUND (1984-85 SDQ Question 37)

	MALE		FEMALE		TOTAL	
	Number	%	Number	%	Number	%
American Indian	2,079	0.5	2,563	0.5	4,642	0.5
Black	31,690	7.5	47,866	10.1	79,556	8.9
Mexican-American	9,131	2.2	10,395	2.2	19,526	2.2
Oriental	21,678	5.1	20,959	4.4	42,637	4.8
Puerto Rican	5,077	1.2	6,000	1.3	11,077	1.2
White	342,079	81.0	373,694	79.1	715,773	80.0
Other	10,716	2.5	10,839	2.3	21,555	2.4
Number Responding	422,450		472,316		894,766	100.0
Minority Students	80,371	19.0	98,622	20.9	178,993	20.0

S.A.T. SCORES BY RACE OR ETHNIC GROUP, 1976 - 1985

YEAR	ALL SCORES		WHITE		BLACK		ASIAN		NATIVE AM.		MEXICAN AM.		PUERTO RICAN		OTHER	
	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math
1976	431	472	451	493	332	354	414	518	388	420	371	410	364	401	410	458
1977	429	470	448	489	330	357	405	514	390	421	370	408	355	397	402	457
1978	429	468	446	485	332	354	401	510	387	419	370	402	349	388	399	450
1979	427	467	444	483	330	358	396	511	386	421	370	410	345	388	393	447
1980	424	466	442	482	330	360	396	509	390	426	372	413	350	394	394	449
1981	424	466	442	483	332	362	397	513	391	425	373	415	353	398	388	447
1982	426	467	444	483	341	366	398	513	388	424	377	416	360	403	392	449
1983	425	468	443	484	339	369	395	514	388	425	375	417	365	397	386	446
1984	426	471	445	487	342	373	398	519	390	427	376	420	366	400	388	450
1985	431	475	449	491	346	376	404	518	392	428	382	426	368	409	391	448

SOURCE: Profiles: College Bound Seniors, 1984, Admissions TGesting Program of the College Board, 1984

TABLE 1-6

SCHOLASTIC APTITUDE TEST SCORES BY SEX AND RACIAL/ETHNIC GROUP, 1981-84

Sex and year	White	Black	Asian	Native American	Mexican American	Puerto Rican
VERBAL						
Male						
1981	447	341	402	399	383	377
1982	448	348	402	396	386	378
1983	448	346	396	397	385	379
1984	452	349	401	401	385	380
Female						
1981	437	327	391	383	364	348
1982	440	335	395	380	367	359
1983	439	335	394	381	367	355
1984	439	336	396	381	369	354
MATHEMATICS						
Male						
1981	508	381	538	449	439	428
1982	510	385	538	450	441	424
1983	510	388	537	451	443	427
1984	511	389	541	452	444	426
Female						
1981	459	350	487	402	392	371
1982	459	354	488	400	394	377
1983	460	356	490	402	393	374
1984	464	362	497	406	399	379

NOTE: Scores range from 200 to 800.

SCORES OF COLLEGE-BOUND SENIORS ON ACHIEVEMENT TESTS IN MATH AND SCIENCE, BY SEX AND RACIAL/ETHNIC GROUP, 1984

Achievement and SAT-M tests	Total	Male	Female	White	Black	Asian	Native American	Mexican American	Puerto Rican
Mathematics Level I	542	560	524	546	481	566	507	486	510
SAT-M (1)	560	583	539	567	482	578	522	494	522
Mathematics Level II	659	671	638	661	577	674	614	603	621
SAT-M	650	664	626	655	563	655	609	594	609
Chemistry	573	586	550	575	505	586	524	524	543
SAT-M	629	644	603	632	535	650	592	590	588
Biology	550	570	533	553	481	556	521	491	517
SAT-M	579	607	556	583	490	609	536	517	524
Physics	597	608	551	600	511	599	574	546	543
SAT-M	651	656	630	655	552	663	634	610	595

(1) Score on the mathematics portion of the aptitude test.

NOTE: Scores range from 200 to 800.

SOURCE: "Science and Math Education in American High Schools," National Center for Education Statistics Bulletin, NCES 84-211b

TABLE 1-7

PERCENT OF 1980 AND 1982 HIGH SCHOOL SENIORS WHO TOOK MATH AND SCIENCE COURSES IN GRADES 10 - 12

SUBJECT	Male	Female	Hispanic	Black	American Indian	Asian American	White
General Math	2.8	2.2	3.5	3.0	2.9	5.6	2.2
Pre-Algebra	14.7	14.7	15.4	18.2	17.1	15.3	14.0
Algebra I	61.0	65.2	53.7	53.2	43.9	65.0	66.4
Algebra II	31.4	30.9	18.8	22.2	17.4	44.2	34.4
Advanced Algebra	8.7	7.3	3.0	5.1	1.8	17.0	9.0
Geometry	47.1	49.3	28.4	33.3	23.9	67.5	53.4
Trigonometry	8.5	6.3	4.6	3.6	3.6	15.6	8.3
Other Adv. Math	14.0	12.8	7.0	5.4	4.5	29.5	15.4
Calculus	6.1	5.0	2.4	2.0	2.0	14.8	6.4
Statistics	1.3	1.1	0.3	0.5	0.6	1.8	1.4
Unified Math II & III	1.6	1.2	0.7	0.7	0.9	1.7	1.5
General Science	29.8	28.9	34.0	32.8	30.4	24.0	28.9
Chemistry I	24.7	24.0	12.9	18.6	17.1	40.9	26.8
Advanced Chemistry	4.6	3.2	1.7	2.2	2.1	7.5	4.4
Other Chemistry	7.9	6.6	3.3	5.7	19.8	13.8	7.8
Geology	15.0	12.8	11.9	10.8	8.8	9.2	14.6
Physics I	14.5	8.4	4.9	5.5	7.1	26.8	12.9
Advanced Physics	2.0	0.9	0.5	1.1	0.0	4.9	1.6
Other Physics	5.3	2.1	1.2	1.9	6.0	8.0	4.2
Other Physical Sci.	2.3	1.8	1.4	2.1	0.0	2.0	2.1
Unified Science	29.6	26.3	30.7	33.8	29.9	16.7	26.8
Basic Biology	72.7	76.1	69.1	74.1	65.4	78.1	75.4
Advanced Biology	7.4	9.2	4.6	5.7	6.3	12.8	9.3
Other Biology	0.7	0.8	0.6	1.2	1.0	0.8	0.7
Biochem./Biophysics	0.3	0.1	0.1	0.0	0.4	0.3	0.3
Botany	0.7	0.9	0.4	0.7	0.4	0.6	0.8
Zoology	4.9	7.6	4.8	5.8	1.3	9.6	6.6
Other Life Sci.	4.3	4.8	3.2	4.5	2.1	4.2	4.8

SOURCE: National Center for Education Statistics, unpublished data and Bulletin 84-211b

TABLE 1-8

PERCENT OF HIGH SCHOOL SENIORS WHO TOOK TWO OR MORE YEARS OF SUBJECT COURSES IN GRADES 9-12, SPRING 1980 OR 1982

SUBJECT	TOTAL	BOYS	GIRLS	WHITE	BLACK	HISPANIC	AM. IN.	ASIAN
English & Literature								
2-2.5 years	14.6	15.3	13.8	15.1	10.3	14.6	12.8	19.0
3 or more years	81.0	79.3	82.6	81.0	82.8	76.2	76.6	76.8
History or Social Studies								
2-2.5 years	41.8	40.8	42.7	42.4	38.4	40.0	37.8	46.1
3 or more years	39.1	40.1	38.2	39.2	38.4	34.7	33.4	37.0
Mathematics								
2-2.5 years	32.8	30.6	34.8	32.3	36.0	35.3	28.2	36.0
3 or more years*	46.2	47.5	45.0	49.5	38.5	31.4	28.6	68.1
Science								
2-2.5 years	29.9	29.6	30.1	29.2	32.6	31.7	26.7	32.0
3 or more years	30.4	33.3	27.7	33.7	22.9	16.0	16.0	45.2

*1982

SOURCE: National College Bound Seniors, 1985 Admissions Testing Program of the College Board

TABLE 1-9

NUMBER OF YEARS OF STUDY BY STUDY BY COLLEGE BOUND SENIORS, BY SUBJECT AND SEX, 1985

	English		Mathematics		For. Languages		Bio. Sciences		Phy. Sciences		Soc. Studies	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	%	%	%	%	%	%	%	%	%	%	%	%
No Courses	0.2	0.1	0.2	0.2	13.9	8.8	4.7	3.3	4.8	8.1	0.6	0.5
One Year	0.9	0.7	0.9	1.3	13.3	11.6	62.1	60.0	24.1	34.4	1.8	1.8
Two Years	1.3	0.9	6.1	9.7	36.9	33.9	25.4	28.8	37.8	37.7	14.9	15.7
Three Years	4.4	3.8	19.8	27.9	20.6	23.2	5.2	5.5	26.1	16.5	40.5	43.0
Four Years	84.8	84.1	57.6	50.5	12.3	17.5	2.0	1.7	5.5	2.7	36.4	33.3
Five or More Years	8.4	10.5	15.4	10.4	3.0	4.9	0.7	0.6	1.7	0.8	5.8	5.7
Number Responding	428405	479261	427992	478767	425452	476929	426541	477578	425984	476205	425431	475987
Mean Number Years	3.98	4.02	3.80	3.58	2.13	2.44	1.40	1.44	2.08	1.74	3.28	3.24
Mean Number (Total)	4.00		3.68		2.29		1.42		1.90		3.26	

TABLE 1-10

PERCENT OF COLLEGE BOUND SENIORS INTENDING TO STUDY VARIOUS FIELDS, BY SEX, 1985

Number Responding	415,731 Males	467,319 Females	883,050 Total		
	Male %	Female %	Total %	SAT Verbal Mean	SAT Math Mean
Arts and Humanities	8.7	11.7	10.3	445	462
Architecture/Environmental Design	2.7	0.8	1.7	420	490
Art	2.1	4.8	3.6	412	427
English/Literature	0.9	1.8	1.4	526	499
Foreign Languages	0.3	1.4	0.9	488	493
Music	1.5	1.3	1.4	443	463
Philosophy and Religion	0.5	0.2	0.3	477	493
Theater Arts	0.6	1.5	1.1	445	443
Biological Sciences and Related Areas	14.1	22.9	18.8	439	480
Agriculture	1.4	0.6	0.9	400	433
Biological Sciences	3.0	3.1	3.1	480	516
Forestry/Conservation	0.6	0.1	0.4	423	452
Health and Medical	9.1	19.0	14.4	433	476
Business, Commerce, and Communications	23.2	26.2	24.8	414	455
Business and Commerce	19.9	22.0	21.0	407	455
Communications	3.3	4.2	3.8	452	454
Physical Sciences and Related Areas	34.1	10.6	21.6	445	530
Computer Science/Systems Analysis	9.4	5.0	7.1	413	488
Engineering	21.1	3.4	11.7	453	545
Mathematics	1.2	1.1	1.1	459	578
Physical Sciences	2.5	1.0	1.7	506	569
Social Sciences and Related Areas	13.3	22.2	18.0	441	461
Education	2.1	7.0	4.7	404	432
Ethnic Studies	0.0	0.0	0.0	388	381
Geography	0.0	0.0	0.0	423	468
History and Cultures	0.7	0.4	0.5	497	484
Home Economics	0.1	0.7	0.4	385	408
Library Science	0.0	0.0	0.0	479	450
Military Science	1.3	0.1	0.7	437	475
Psychology	1.6	6.3	4.1	440	455
Social Sciences	7.5	7.6	7.5	465	482
Miscellaneous	6.6	6.4	6.5	429	469
Other	1.1	0.9	1.0	402	435
Trade and Vocational	0.8	0.7	0.8	350	387
Undecided	4.7	4.8	4.8	446	488

SOURCE: 1980 Census of Population, Supplementary Report May 1981, U.S. Department of Commerce and personal communication, U.S. Bureau of the Census; Asian Americans: Growth, Change and Diversity, Population Reference Bureau, 1985; U. S. Department of Labor Bureau of Labor Statistics, Household Data on Employment Status and Enrollment

TABLE 1-11

U.S. POPULATION, 1980 AND 1985; AND COLLEGE ENROLLMENTS
(Numbers in Thousands)

	U.S. Pop. 1980		U.S. Pop. 1985		% of 20-24 Yr. Olds in College	% of Total Enrollment Fall 1982			
	No.	%	No.	%	%	4-Year Univ.	4-Year Colleges	2-Year Colleges	All Higher Education
Total U.S.	226,505	100.0	234,066	100.0	24%	100.0	100.0	100.0	100.0
White	188,341*	83.2	199,117	85.1	24	84.9	80.9	77.9	80.7
Black	26,488	11.7	28,151	12.0	20	5.0	9.8	10.3	8.9
Hispanic	14,606	6.5	16,940	7.2	16	2.3	3.4	6.1	4.2
Mexican			10,269						
Puerto Rican			2,562						
Cuban			1,036						
Central or South Am.			1,722						
Other			1,350						
Indian/Aluskan Native	1,418	0.6	1,507	0.6		0.4	0.5	1.0	0.7
Asian/Pacific Islander	3,501	1.6	5,148	2.2		2.8	2.4	3.3	2.8
Chinese			1,079		60				
Filippino			1,052		27				
Japanese			766		48				
Vietnamese			634		42				
Korean			543		40				
Asian Indian			526						
Laotian			218						
Cambodia			161						
Other			169						
Other Minority**	6,757	3.0				4.6	2.9	1.3	2.7

* Non-Hispanic **Includes Nonresident Alien Notes: Totals may not add to 100.0% due to rounding. Except for 1980 Census Data and Data on Full-Time Enrollment, Fall 1982, persons of Spanish origin are also included in racial groups.

SOURCES: U.S. Bureau of the Census, National Center for Education Statistics, National Science Foundation, National Research Council, Scientific Manpower Commission.

TABLE 1-12

PERCENTAGE OF U.S. MINORITIES IN VARIOUS POPULATION GROUPS

(Data are for 1980 unless otherwise noted)

	White*	Black	Hispanic	Asian	Indian	Foreign
U.S. Population (1984)	75.5	11.7	7.2	1.9	0.7	3.0
Elem/Secondary Enrollment	73.3	16.1	8.0	1.9	0.8	
High School Graduates (1978)	82.3	11.7	4.2	2.8	0.7	2.7
Undergraduate Enrollment	80.6	10.1	4.2	2.3	0.7	2.1
Graduate Enrollment	81.9	5.5	2.2	2.1	0.4	7.9
First Profess. Enrollment	89.3	4.6	2.4	2.2	0.4	1.0
Total Enrollment (1982)	80.7	8.9	4.2	2.8	0.7	2.7
Bachelor's Degrees (1981)	86.4	6.5	2.3	2.0	0.4	2.4
Master's Degrees (1981)	82.0	5.8	2.2	2.1	0.3	7.5
Ph.D. Degrees (1984)	69.7	3.4	1.9	3.3	0.2	15.4
Sci/Eng Ph.D.s (1983)	66.5	2.0	1.6	4.2	0.2	19.5

*Non-Hispanic

SOURCE: Students, Graduates and Dropouts, October 1980-82, Bulletin 2192, December 1983, and Household Data, Table A-7, Bureau of Labor Statistics, October 1985

TABLE 1-13

ENROLLMENT STATUS OF PERSONS 16-24 YEARS OLD BY SEX AND RACE/ETHNICITY, 1981 AND 1985

(Numbers In Thousands)

Enrollment Status	1981				OCTOBER, 1985			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
TOTAL	**36,946**	**31,109**	**4,933**	**2,685**	**34,379**	**28,577**	**4,797**	**2,891**
ENROLLED	**15,909**	**13,312**	**2,083**	**984**	**15,236**	**12,660**	**2,000**	**1,064**
Men	8,150	6,853	1,010	517	7,759	6,481	985	546
Women	7,759	6,459	1,072	467	7,477	6,179	1,015	518
16 to 19 Years	11,208	9,285	1,598	752	10,436	8,593	1,476	798
20 to 24 Years	4,701	4,027	485	232	4,800	4,067	524	266
High School	8,108	6,572	1,303	627	7,437	5,961	1,230	679
College	7,800	6,740	780	357	7,799	6,699	770	385
Full-Time Students	6,503	5,613	661	288	6,645	5,645	631	300
Part-Time Students	1,297	1,127	119	69	1,252	1,054	139	85
NOT ENROLLED	**21,037**	**17,797**	**2,850**	**1,701**	**19,143**	**15,917**	**2,797**	**1,827**
Men	10,018	8,562	1,292	816	9,133	7,666	1,273	927
Women	11,019	9,236	1,558	885	10,010	8,251	1,524	900
School Completed								
High School								
Less Than 4 Years	5,142	4,107	913	891	4,267	3,437	716	796
16 to 19 Years	1,921	4,132	684	486				
20 to 24 Years	3,222	13,665	2,166	1,215				
4 Years Only	11,451	9,778	1,501	634	14,876	12,479	2,080	1,032
College								
1 to 3 Years	2,926	2,511	348	141	2,978	2,524	392	215
4 Years or More	1,517	1,402	88	36	1,572	1,409	98	58

SOURCE: High School and Beyond Longitudinal Study Tabulations, National Center for Education Statistics, October 1985

TABLE 1-14

PERCENTAGES OF 1980 HIGH SCHOOL GRADUATES WHO HAD ENROLLED IN POST-SECONDARY EDUCATION BY FEBRUARY 1984 BY TYPE OF INSTITUTION, SEX AND RACE/ETHNICITY

	ANY PSE	ANY VOC/ TECH	ANY 2YR COLLEGE	ANY 4YR COLLEGE
TOTAL	65.75	7.64	27.89	45.15
SEX				
MALE	62.78	5.87	27.37	44.00
FEMALE	68.59	9.34	28.38	46.25
RACE/ETHNICITY				
HISPANIC	57.10	7.44	34.56	30.48
-MEXICAN	56.59	7.97	35.73	28.00
-CUBAN	83.09	8.32	52.12	47.70
-PUERTO RICAN	51.80	6.18	16.91	40.37
-OTH HISP	54.64	6.57	34.43	28.89
AM INDIAN	62.62	8.64	35.44	33.31
ASIAN	89.50	9.69	34.97	68.88
BLACK	61.73	9.06	23.21	42.66
WHITE	66.97	7.49	28.13	46.53

TABLE 1-15

PERCENTAGES OF 1980 HIGH SCHOOL GRADUATES WHO EARNED A CERTIFICATE, LICENSE OR DEGREE BY FEBRUARY 1984, BY TYPE OF AWARD, SEX AND RACE/ETHNICITY

	CERTIFICATE	LICENSE	AA DEGREE	BA/BS DEGREE	ANY CERT/DEG
TOTAL	31.82	13.12	17.19	25.86	42.29
SEX					
MALE	27.92	9.15	15.36	24.59	38.65
FEMALE	34.16	15.52	18.87	27.04	45.50
RACE/ETHNICITY					
HISPANIC	33.40	19.76	14.67	14.48	40.94
-MEXICAN	21.91	19.82	9.71	11.22	40.43
-CUBAN	26.81	1.47	24.46	28.62	44.21
-PUERTO RICAN	75.12	0.00	22.20	16.18	35.64
-OTH HISP	51.37	30.59	21.21	15.18	42.72
AM INDIAN	55.01	7.30	10.20	20.41	47.92
ASIAN	45.93	36.08	15.00	12.41	32.88
BLACK	29.24	6.82	8.93	13.38	34.63
WHITE	31.51	13.31	18.57	28.27	43.60

SOURCE: The American Freshman: National Norms for Fall 1971 through 1984, American Council on Education, Office of Research and Cooperative Institutional Research Program, American Council on Education, University of California at Los Angeles

TABLE 1-16

PERCENTAGE DISTRIBUTION OF FRESHMEN BY PROBABLE MAJOR FIELD OF STUDY IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1971 - 1984

Probable Major Field of Study	1971		1973		1975		1978		1980		1982		1983		1984	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Agriculture/Forestry	5.4	0.7	4.4	1.0	5.7	1.9	4.5	2.0	4.1	1.8	3.8	1.4	2.9	0.9	3.3	1.0
Arts & Humanities*	16.8	20.5	10.1	15.0	12.7	12.8	7.4	10.6	6.4	10.1	6.8	9.7	6.8	9.0	6.6	8.8
Biological Sciences	4.4	2.7	8.2	5.7	7.1	5.5	4.8	4.4	3.7	3.8	3.7	3.8	4.1	3.4	4.1	4.2
Business	18.3	14.2	21.1	14.0	20.1	17.5	25.0	23.1	22.9	24.5	22.3	25.7	22.7	26.0	25.1	27.5
Education	4.6	15.9	5.2	19.6	4.6	15.5	3.3	12.1	3.3	11.6	2.4	9.0	2.9	8.9	2.8	9.6
Engineering	13.2	0.3	12.1	0.7	14.0	1.3	18.8	2.3	21.0	3.2	22.3	3.6	20.6	3.5	20.1	3.0
Health Professions (Non-M.D.)	2.6	16.1	4.6	16.5	1.8	13.2	2.0	14.6	1.9	13.3	1.6	17.8	2.1	14.9	2.3	13.8
Mathematics/Statistics	2.6	2.9	1.8	1.6	1.1	1.1	1.1	0.8	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.9
Computer Science							1.6	1.2	2.7	2.4	4.9	4.0	5.4	3.7	4.3	2.7
Physical Sciences	3.1	0.8	4.2	1.1	4.0	1.3	3.5	1.3	3.6	1.6	2.6	1.0	2.5	1.0	2.5	1.1
Premed, Predent, Prevet.							4.0	2.9	3.6	3.2	3.2	3.0	3.3	3.2	3.2	3.1
Social Sciences*	5.6	12.2	5.5	11.7	3.7	8.9	5.0	9.5	4.5	8.6	4.2	7.2	4.2	7.6	5.1	8.4
Other Fields (Technical)	7.3	2.6	8.4	2.0	10.3	6.7	7.0	2.0	8.5	2.9	9.7	4.3	9.9	3.8	7.7	2.4
Other Fields (Non-Technical)	1.4	5.0	7.1	3.5	10.2	8.8	8.1	7.9	9.3	6.9	8.2	3.3	8.1	7.1	8.0	7.6
Undecided	2.3	2.3	4.5	4.9	4.6	5.5	3.9	5.3	3.8	5.5	3.7	5.5	4.0	5.7	4.1	6.2

* Political Science is included in Arts and Humanities through 1975 and in Social Sciences after 1975.
** Totals may not equal 100% due to rounding.

SOURCE: The American Freshman: National Norms for Fall 1978 through 1984, Cooperative Institutional Research Program, University of California at Los Angeles and American Council on Education

TABLE 1-17

PROBABLE CAREER CHOICES OF COLLEGE FRESHMEN, BY SEX (WEIGHTED NATIONAL NORMS), SELECTED YEARS, 1978-1984

FIELD	1978		1979		1980		1981		1982		1983		1984	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Accountant/Actuary	6.4	6.2	5.6	5.8	5.4	6.2	4.9	6.1	5.1	6.5	5.0	6.7	5.2	6.8
Actor/Entertainer	0.8	1.0	0.9	1.1	0.9	1.0	0.8	1.0	0.7	1.0	0.8	0.9	0.7	0.9
Architect/Urban Plan.	2.5	0.5	2.8	0.8	2.8	0.8	2.2	0.5	2.2	0.6	1.9	0.5	2.2	0.5
Artist	1.0	2.1	1.3	2.1	1.4	2.4	1.3	2.2	1.3	2.1	1.5	1.9	1.3	1.6
Business														
Clerical	0.3	4.6	0.4	4.1	0.3	3.9	0.3	3.8	0.3	3.5	0.3	3.6	0.4	3.5
Executive	11.3	7.3	11.6	8.2	11.1	9.2	11.2	9.4	10.8	10.1	11.3	10.0	12.5	11.4
Owner/Proprietor	4.1	1.0	4.5	1.2	4.1	1.3	4.1	1.5	3.9	1.5	4.0	1.5	4.5	1.7
Salesperson/Buyer	1.2	1.3	1.3	1.5	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.3	1.3	1.3
Clergy	0.8	0.2	0.7	0.1	0.7	0.1	0.7	0.1	0.5	0.1	0.5	0.1	0.4	0.1
Clinical Psychologist	0.5	1.4	0.5	1.6	0.4	1.4	0.4	1.4	0.3	1.4	0.5	1.4	0.5	1.7
College Teacher	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2
Comp. Progr/Analyst	4.0	3.0	4.7	3.3	5.6	4.9	7.5	6.4	9.7	8.0	10.2	7.0	7.7	4.6
Conserv/Forester	1.9	0.8	1.8	0.7	1.4	0.7	1.9	0.7	1.3	0.5	1.1	0.3	1.1	0.2
Dentist	1.4	0.6	1.2	0.6	1.2	0.7	0.9	0.5	0.9	0.5	0.9	0.6	0.7	0.5
Dietician	0.1	1.0	0.1	0.7	0.1	0.7	0.1	0.8	0.1	0.6	0.1	0.5	0.1	0.5
Engineer	16.5	2.2	16.8	2.3	19.1	2.9	19.5	2.9	20.6	3.6	18.8	3.3	18.5	2.9
Farmer/Rancher	1.8	0.5	2.0	0.5	2.0	0.4	2.4	0.6	2.0	0.4	1.4	0.2	1.6	0.3
Foreign Serv. Worker	0.3	0.7	0.3	0.6	0.4	0.6	0.4	0.6	0.4	0.7	0.4	0.7	0.5	0.8
Homemaker(full-time)	0.0	0.3	0.0	0.4	0.1	0.2	0.0	0.3	0.0	0.2	0.0	0.1	0.0	0.1
Interior Decorator	0.1	1.0	0.1	1.1	0.1	1.0	0.0	1.0	0.1	1.0	0.1	0.8	0.1	0.8
Interpreter	0.1	0.3	0.0	0.3	0.0	0.3	0.0	0.3	0.1	0.3	0.0	0.3	0.0	0.4
Lab. Tech/Hygienist	0.7	3.0	0.6	2.7	0.6	2.3	0.4	1.9	0.5	2.0	0.7	1.9	0.4	1.5
Law Enforce. Officer	2.2	0.9	1.7	0.7	1.8	0.6	1.4	0.4	1.9	0.5	1.8	0.6	1.8	0.5
Lawyer/Judge	5.3	3.4	5.0	3.4	4.8	3.5	4.5	3.4	4.7	3.9	4.2	3.6	4.4	3.7
Military Career	1.8	0.4	1.9	0.3	1.7	0.2	1.8	0.2	1.6	0.2	2.0	0.3	2.1	0.3
Musician	1.6	1.2	1.6	1.1	1.5	0.9	1.5	1.0	1.4	0.9	1.2	0.9	1.2	0.7
Nurse	0.2	7.7	0.2	7.0	0.2	7.2	0.2	7.3	0.2	7.7	0.3	8.4	0.2	7.5
Optometrist	0.3	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Pharmacist	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.3	0.5	0.5	0.7	0.5	0.8
Physician	4.3	2.8	4.0	2.9	4.1	2.9	4.0	2.9	4.1	3.1	4.5	3.4	4.5	3.5
School Counselor	0.1	0.3	0.1	0.4	0.1	0.3	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.3
School Princ/Supt.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scientific Researcher	2.7	1.7	2.4	1.3	2.2	1.3	2.0	1.2	1.8	1.2	1.8	1.2	1.9	1.2
Social/Rec. Worker	0.6	3.9	0.6	3.9	0.6	3.2	0.4	2.6	0.3	2.0	0.4	2.1	0.4	2.1
Statistician	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Therapist	0.5	3.4	0.6	3.5	0.6	3.4	0.6	3.6	0.5	3.3	0.7	3.8	0.9	3.8
Teacher (Elementary)	0.4	6.8	0.5	7.0	0.5	6.9	0.4	6.4	0.4	5.5	0.3	5.7	0.4	6.1
Teacher (Secondary)	2.0	3.0	2.1	3.0	1.9	2.4	1.6	2.4	1.4	1.9	1.8	2.1	1.8	2.5
Veterinarian	1.1	1.6	0.9	1.4	0.9	1.5	0.8	1.5	0.8	1.5	0.7	1.3	0.7	1.5
Writer/Journalist	1.4	2.4	1.7	2.7	1.6	2.5	1.7	2.6	1.6	2.6	1.5	2.5	1.6	2.4
Skilled Trades	3.1	0.4	2.7	0.4	3.2	0.5	3.1	0.4	2.9	0.3	2.7	0.4	2.4	0.2
Other	5.7	8.3	6.2	8.9	5.8	8.1	6.1	8.1	5.6	7.5	5.5	7.4	5.3	7.7
Undecided	9.6	11.6	9.4	11.4	8.9	11.3	8.8	11.3	8.1	10.8	8.8	11.3	9.2	12.3

SOURCE: The American Freshman: National Norms for Fall 1971 through 1984, Cooperative Institutional Research Program, University of California at Los Angeles and American Council on Education

TABLE 1-18

RACIAL BACKGROUND OF FRESHMEN IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1971 - 1984

RACIAL BACKGROUND	1971	1973	1975	1977	1979	1981	1982	1983	1984
WHITE/CAUCASIAN									
Men	92.1	89.1	87.2	87.9	87.2	89.5	89.0	88.0	86.9
Women	90.6	87.9	85.6	86.0	85.4	87.6	87.5	85.9	84.6
BLACK/NEGRO/AFRO-AMERICAN									
Men	5.5	7.0	8.0	7.8	8.2	7.5	7.6	7.8	8.6
Women	7.2	8.6	10.1	9.8	10.1	9.6	9.4	10.1	10.9
AMERICAN INDIAN									
Men	1.0	0.8	0.9	0.8	1.0	1.1	1.0	1.0	1.0
Women	0.9	1.0	0.8	0.7	1.0	1.0	0.9	1.1	0.9
ASIAN-AMERICAN/ORIENTAL									
Men	0.5	1.2	1.6	1.2	1.6	1.2	1.5	1.7	1.8
Women	0.4	1.0	1.3	1.0	1.2	1.0	1.3	1.4	1.5
MEXICAN-AMERICAN/CHICANO									
Men	1.1	1.3	1.8	1.4	1.1	0.9	0.9	0.9	0.9
Women	1.1	1.2	1.6	1.4	1.2	0.9	0.9	0.9	1.1
PUERTO RICAN-AMERICAN									
Men	0.2	0.5	0.7	0.9	1.1	0.6	0.9	0.7	0.8
Women	0.2	0.4	0.6	1.0	1.0	0.6	0.9	0.7	0.8
OTHER									
Men	1.2	1.5	2.1	1.9	2.2	1.8	1.5	1.8	1.7
Women	1.1	1.5	1.7	1.6	1.8	1.2	1.3	1.5	1.7

SOURCE: Fall Enrollment in Higher Education, Fall 1982, U.S. Department of Education, Office for Civil Rights, Unpublished

TABLE 1-19

PERCENT OF FULL-TIME ENROLLMENT, FALL 1982

	UNDERGRADUATE			GRADUATE			PROFESSIONAL		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL U.S.	100.0	50.5	49.5	100.0	58.0	42.0	100.0	68.7	31.3
White (Non-Hispanic)	79.1	40.3	38.7	73.7	40.2	33.6	87.7	61.0	26.7
Black	9.7	4.1	5.6	4.2	1.8	2.4	4.6	2.5	2.1
Hispanic	5.6	2.6	3.0	2.6	1.2	1.3	3.4	2.3	1.1
Indian/Alaskan Native	0.6	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.1
Asian/Pacific Islander	2.6	1.4	1.2	2.7	1.7	1.0	2.9	1.8	1.0
Non Resident Alien	2.7	1.9	0.8	16.5	12.8	3.7	1.1	0.9	0.3

NOTE: Details may not add up to 100.0 because of rounding

SOURCE: National Center for Education Statistics, Unpublished Data

TABLE 1-20

TOTAL ENROLLMENT* IN HIGHER EDUCATION BY RACIAL/ETHNIC CATEGORY, SEX AND CONTROL, FALL 1980 AND 1982

RACIAL/ETHNIC CATEGORY AND SEX	1980			1982			% Change, 1980-1982		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
TOTAL	12,087,625	9,456,423	2,631,202	12,387,868	9,695,116	2,692,752	2.48	2.52	2.34
Men	5,868,738	4,521,632	1,347,106	5,999,243	4,631,933	1,367,310	2.22	2.44	1.50
Women	6,218,887	4,934,791	1,284,096	6,388,625	5,063,183	1,325,442	2.73	2.60	3.22
American Indian/Alaskan Native	85,798	74,224	11,574	87,700	77,370	10,330	2.22	4.24	-10.75
Men	38,968	33,417	5,551	39,887	35,286	4,601	2.36	5.59	-17.11
Women	46,830	40,807	6,023	47,813	42,084	5,729	2.10	3.13	- 4.88
Asian or Pacific Islander	286,408	239,710	46,698	351,001	295,619	55,382	22.55	23.32	18.60
Men	151,260	124,771	26,489	188,981	157,811	31,170	24.94	26.48	17.67
Women	135,148	114,939	20,209	162,020	137,808	24,212	19.88	19.90	19.81
Black, Non-Hispanic	1,106,445	876,070	230,375	1,101,499	873,117	228,382	- 0.45	- 0.34	- 0.87
Men	463,590	365,296	98,294	457,916	360,601	97,315	- 1.22	- 1.43	- 1.00
Women	642,855	510,774	132,081	643,583	512,516	131,067	0.11	0.34	- 0.77
Hispanic	471,686	406,150	65,536	519,250	445,646	73,604	10.08	9.72	12.31
Men	231,590	198,652	32,938	251,771	214,987	36,784	8.71	8.22	11.68
Women	240,096	207,498	32,598	267,479	230,659	36,820	11.41	11.16	12.95
White, Non-Hispanic	9,831,493	7,656,094	2,175,399	9,997,117	7,784,698	2,212,419	1.68	1.68	1.70
Men	4,771,921	3,658,136	1,113,785	4,830,406	3,710,267	1,120,139	1.23	1.43	5.82
Women	5,059,572	3,997,958	1,061,614	5,166,711	4,074,431	1,092,280	2.12	1.92	2.89
Non-Resident Alien	305,795	204,175	101,620	331,301	218,666	112,635	8.34	7.10	10.84
Men	211,409	141,360	70,049	230,282	152,981	77,301	8.93	8.22	10.35
Women	94,386	62,815	31,571	101,019	65,685	35,334	7.03	4.57	11.92

* Excludes those students whose racial/ethnic category was not reported.

TABLE 1-21

TOTAL ENROLLMENT* IN INSTITUTIONS OF HIGHER EDUCATION, BY RACIAL/ETHNIC CATEGORY AND BY TYPE AND CONTROL, FALL 1982

TYPE AND CONTROL OF INSTITUTION	Total Enrollment	RACIAL/ETHNIC CATEGORY					
		American Indian/ Alaskan Native	Asian or Pacific Islander	Black, Non-Hispanic	Hispanic	White, Non-Hispanic	Non-Resident Alien
ALL INSTITUTIONS	12,387,868	87,700	351,001	1,101,499	519,250	9,997,117	331,301
Universities	2,884,455	12,603	80,765	144,507	65,470	2,449,501	131,809
Other 4-year Institutions	4,764,311	25,973	112,334	467,993	163,199	3,856,078	138,714
2-year Institutions	4,739,822	49,124	157,882	489,199	290,581	5,691,538	61,498
PUBLIC INSTITUTIONS	9,695,116	77,370	295,619	873,117	445,646	7,784,698	218,666
Universities	2,152,547	10,624	57,906	99,742	44,184	1,853,299	86,792
Other 4-year Institutions	3,022,916	20,304	82,405	320,985	119,960	2,404,628	74,634
2-year Institutions	4,519,653	46,442	155,308	452,390	281,502	3,526,771	57,240
PRIVATE INSTITUTIONS	2,692,752	10,330	55,382	228,382	73,604	2,212,419	112,635
Universities	731,188	1,979	22,859	44,565	21,286	596,202	44,297
Other 4-year Institutions	1,741,395	5,669	29,949	147,008	43,239	1,451,450	64,080
2-year Institutions	220,169	2,682	2,574	36,809	9,079	164,767	4,258

* Excludes those students whose racial/ethnic category was not reported.

SOURCE: National Center for Education Statistics, as published by the Chronicle of Higher Education, January 22, 1986

TABLE 1-22

ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION BY TYPE AND CONTROL OF INSTITUTION AND SEX AND BY STUDENT LEVEL AND SEX, FALL 1984

	All students			Full-time students			Part-time students		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Public institutions									
Doctoral	2,395,847	1,246,481	1,149,366	1,812,016	973,541	836,475	583,831	272,940	310,891
Comprehensive	2,201,428	1,025,925	1,175,503	1,431,413	697,762	733,651	770,015	328,163	441,852
General baccalaureate	392,294	184,066	208,228	238,551	117,128	121,423	153,743	66,938	86,805
2-year	4,249,601	1,867,166	2,382,435	1,488,267	731,370	756,897	2,761,334	1,135,796	1,625,538
All*	9,459,592	4,466,026	4,993,566	5,143,573	2,640,119	2,503,454	4,316,019	1,825,907	2,490,112
Private institutions									
Doctoral	663,985	349,660	284,325	485,691	285,791	199,900	168,294	83,869	84,425
Comprehensive	663,127	331,324	331,803	421,046	213,988	207,058	242,081	117,336	124,745
General baccalaureate	754,136	329,552	424,584	569,708	258,329	311,379	184,428	71,223	113,205
2-year	277,134	120,464	156,670	208,826	93,126	115,700	68,308	27,338	40,970
All*	2,782,348	1,397,548	1,384,800	1,954,615	1,007,390	947,225	827,533	390,158	437,375
All institutions									
Doctoral	3,029,832	1,596,141	1,433,691	2,277,707	1,239,332	1,036,375	752,125	356,809	396,316
Comprehensive	2,864,555	1,357,249	1,507,306	1,852,459	911,750	940,709	1,012,096	445,499	566,597
General baccalaureate	1,146,430	513,618	632,812	808,259	375,457	432,802	338,171	138,161	200,010
2-year	4,526,735	1,987,630	2,539,105	1,697,093	824,496	872,597	2,829,640	1,163,134	1,666,506
All*	12,241,940	5,863,574	6,378,388	7,098,329	3,847,509	3,450,879	5,143,552	2,216,065	2,927,487
Undergraduates									
Doctoral institutions	2,092,441	1,093,845	998,596	1,798,800	952,876	845,924	293,641	140,969	152,672
Comprehensive	2,185,138	1,050,457	1,134,681	1,690,721	826,450	864,271	494,417	224,007	270,410
General baccalaureate	980,761	442,047	538,714	779,962	359,836	420,126	200,799	82,211	118,588
2-year	3,829,930	1,703,027	2,126,903	1,617,061	784,827	832,234	2,212,869	918,200	1,294,669
All*	9,505,798	4,545,316	4,960,482	6,205,199	3,123,830	3,083,369	3,300,599	1,423,486	1,877,113
First-time freshmen									
Doctoral institutions	392,172	197,431	194,741	370,897	187,702	183,195	21,275	9,729	11,546
Comprehensive	405,288	190,610	214,678	356,913	168,882	188,031	48,375	21,728	26,647
General baccalaureate	228,929	103,604	125,325	204,334	93,218	111,116	24,595	10,386	14,209
2-year	1,234,468	561,055	673,413	609,453	294,903	314,550	625,015	266,152	358,863
All*	2,356,898	1,112,303	1,244,595	1,613,185	786,099	827,086	743,713	326,204	417,509
Graduate students									
Doctoral institutions	596,847	325,811	271,036	323,411	190,415	132,996	273,436	135,396	138,040
Comprehensive	376,547	171,524	205,023	86,223	43,683	42,540	290,324	127,841	162,483
General baccalaureate	34,507	15,247	19,260	6,383	3,495	2,888	28,124	11,752	16,372
Specialized	99,669	60,051	39,618	46,741	29,502	17,239	52,928	30,549	22,379
2-year	3,016	2,231	785	414	197	217	2,602	2,034	568
All*	1,114,184	576,609	537,575	465,025	268,275	196,750	649,159	308,334	340,825
First professional									
Doctoral institutions	131,480	83,556	47,924	123,404	78,731	44,673	8,076	4,825	3,251
Comprehensive	40,893	25,742	15,151	34,054	21,519	12,535	6,839	4,223	2,616
General baccalaureate	7,583	5,215	2,368	6,069	4,177	1,892	1,514	1,038	476
Specialized	95,465	68,201	27,264	83,520	59,952	23,568	11,945	8,249	3,696
All*	278,598	184,949	93,649	249,708	166,286	83,422	28,890	18,663	10,227
Unclassified									
All	1,343,360	556,700	786,660	178,456	91,118	87,338	1,164,904	465,582	699,322

*Includes students enrolled in specialized institutions and new institutions not yet classified.

SOURCE: Fall Enrollment in Higher Education, 1982, U.S. Department of Education, Office for Civil Rights, Unpublished

TABLE 1-23

ENROLLMENT IN SELECTED FIELDS BY SEX AND ETHNICITY, FALL 1982

ENROLLMENT	Total Enrollment		Mathematics		Architecture/ Environ. Design		Life Sciences		Business & Management		Physical Sciences		Engineering		Law	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
Undergraduate																
ALL STUDENTS	9,301,454	4,828,572	64,573	27,991	48,571	15,074	191,342	95,624	1,070,393	489,697	115,765	31,653	449,768	65,621	69	26
White, Non-Hispanic	7,360,638	3,807,161	51,504	22,178	39,152	12,310	148,455	72,070	860,492	382,589	98,150	25,564	354,077	49,913	50	18
Black	883,525	514,804	6,063	2,993	2,362	718	15,344	9,539	96,288	54,262	5,302	2,299	22,752	6,258	4	2
Asian/Pacif. Isl.	254,670	117,629	1,944	867	1,533	529	8,282	3,981	19,850	10,535	3,351	1,130	21,090	3,820	12	6
American Indian	67,040	36,447	243	96	141	36	932	478	4,672	2,322	444	134	1,539	276	1	0
Hispanic	541,711	290,323	2,037	916	2,173	634	13,597	7,477	60,854	31,347	4,394	1,540	18,009	2,880	2	0
Non-Res. Alien	193,870	62,208	2,782	941	3,210	847	4,732	2,079	28,237	8,642	4,124	986	32,301	2,474	0	0
Graduate																
ALL STUDENTS	1,020,148	482,920	11,569	3,648	10,162	3,571	35,911	14,630	197,618	64,781	35,086	7,444	66,847	7,046	28	13
White, Non-Hispanic	822,957	405,220	7,538	2,575	7,576	2,876	29,387	12,032	169,471	56,333	25,702	5,602	40,212	5,155	23	11
Black	50,919	31,308	293	130	365	147	1,018	531	6,891	2,992	520	152	1,019	202	0	0
Asian/Pacif. Isl.	23,709	8,786	425	137	275	109	1,128	476	4,652	1,537	1,165	291	4,200	447	0	0
American Indian	3,369	1,706	23	8	26	8	69	26	515	160	71	16	92	9	0	0
Hispanic	24,189	12,936	140	41	210	63	584	276	3,642	1,259	473	115	818	90	2	0
Non-Res. Alien	95,005	22,964	3,150	757	1,710	368	3,725	1,289	12,447	2,500	7,155	1,268	20,506	1,143	3	2
	PERCENTAGES															
	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)	(V)	(H)
Undergraduate																
ALL STUDENTS	100.0	51.9	100.0	43.4	100.0	31.0	100.0	50.0	100.0	45.8	100.0	27.3	100.0	14.6	100.0	37.7
White, Non-Hispanic	79.1	51.7	80.0	43.1	80.6	31.4	77.6	48.6	80.4	44.5	84.8	26.1	78.7	14.1	72.5	36.0
Black	9.5	58.3	9.4	49.4	4.9	30.4	8.0	62.2	9.0	56.4	4.6	43.4	5.1	27.5	5.8	0.5
Asian/Pacif. Isl.	2.7	46.2	3.0	44.6	3.2	34.5	4.3	48.1	1.9	53.1	2.9	33.7	4.7	18.1	17.4	0.5
American Indian	0.7	54.4	0.4	39.5	0.3	25.5	0.5	51.3	0.4	49.7	0.4	30.2	0.3	17.9	1.5	0.0
Hispanic	5.8	53.6	3.2	45.0	4.5	29.2	7.1	55.0	5.7	51.5	3.8	35.1	4.0	16.0	2.9	0.0
Non-Res. Alien	2.1	32.1	4.3	33.8	6.6	26.4	2.5	43.9	2.6	30.6	3.6	23.9	7.2	7.7	0.0	
Graduate																
ALL STUDENTS	100.0	47.3	100.0	31.5	100.0	35.1	100.0	40.7	100.0	32.8	100.0	21.2	100.0	10.5	100.0	46.4
White, Non-Hispanic	80.7	49.2	65.2	34.2	74.6	38.0	81.8	40.9	85.8	33.2	73.3	21.8	60.2	12.8	82.1	47.8
Black	5.0	61.5	2.5	44.4	3.6	40.3	2.8	52.2	3.5	43.4	1.5	29.2	1.5	19.8	0.0	
Asian/Pacific Isl.	2.3	37.1	3.7	32.2	2.7	39.6	3.1	42.2	2.4	33.0	3.3	25.0	6.3	10.6	0.0	
American Indian	0.3	50.6	0.2	34.8	0.3	30.8	0.2	37.7	0.3	31.1	0.2	22.5	0.1	9.8	0.0	
Hispanic	2.4	53.5	1.2	29.3	2.1	30.0	1.6	47.3	1.8	34.6	1.4	24.3	1.2	11.0	7.1	0.0
Non-Res. Alien	9.3	24.2	27.2	24.0	16.8	21.5	10.4	34.6	6.3	20.1	20.4	17.7	30.7	5.6	10.7	66.7

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1986

TABLE 1-24

GRADUATE RECORD EXAMINATION (GRE) SCORES BY SEX, RACE AND UNDERGRADUATE MAJOR, 1978-79 AND 1983-84

SEX/RACE	All S/E		Physical Science		Mathematical Science		Engineering		Biological Science		Behavioral Science		Social Science	
	1978-79	1983-84	1978-79	1983-84	1978-79	1983-84	1978-79	1983-84	1978-79	1983-84	1978-79	1983-84	1978-79	1983-84
Men														
Verbal	495	490	514	508	510	497	465	463	485	506	506	509	452	456
Quantitative	575	602	640	638	682	672	661	669	577	585	522	536	501	510
Analytical	515	545	555	568	568	594	525	554	518	550	509	525	473	488
Women														
Verbal	500	497	534	513	498	488	497	507	500	512	509	503	457	450
Quantitative	502	522	600	605	636	637	603	659	528	556	479	488	446	448
Analytical	515	535	564	576	565	589	534	605	526	560	513	521	469	481
White														
Verbal	523	528	541	540	537	545	527	536	521	531	528	528	484	487
Quantitative	557	576	639	634	682	676	675	683	569	582	514	521	496	496
Analytical	547	572	581	598	602	638	587	624	553	580	535	546	506	519
Black														
Verbal	372	386	391	412	364	373	403	443	358	400	386	390	343	350
Quantitative	375	394	462	484	486	477	521	563	381	420	366	368	337	334
Analytical	365	406	406	444	401	427	437	504	359	419	371	399	333	368
Asian														
Verbal	486	495	495	534	476	473	459	472	494	514	503	515	453	455
Quantitative	592	625	658	671	660	669	675	679	596	617	528	551	494	512
Analytical	524	551	546	590	549	572	533	559	537	561	510	526	464	486
Native American														
Verbal	472	488	482	501	494	473	478	528	447	492	483	495	451	448
Quantitative	476	500	581	600	671	580	570	678	479	534	457	464	443	415
Analytical	471	507	523	560	553	550	505	626	456	527	468	491	455	441
Mexican American														
Verbal		450	509	495	420	450	434	481	407	461	446	448	409	409
Quantitative		480	600	565	595	580	595	634	448	505	427	438	413	406
Analytical		473	516	521	467	512	487	547	421	483	435	457	404	427
Puerto Rican														
Verbal		392	418	394	375	376	390	416	398	378	399	408	363	363
Quantitative		454	532	523	550	531	583	590	450	448	387	399	378	389
Analytical		421	433	443	412	453	439	494	401	410	382	403	362	390
Latin American														
Verbal		481	509	509	468	466	476	475	473	489	481	491	465	431
Quantitative		514	592	580	626	619	624	620	509	546	460	468	429	409
Analytical		497	524	518	530	521	520	533	484	525	473	483	448	435

Note: Scores range from 200 to 800.

SOURCE: Graduate Science Education, Student Support and Postdoctorals, Fall 1980; and Academic Science/Engineering: Graduate Enrollment and Support, Fall, 1983, National Science Foundation

TABLE 1-25

TOTAL GRADUATE ENROLLMENTS IN SCIENCE AND ENGINEERING BY LEVEL OF DEPARTMENT, 1980 AND 1983

FIELD	FALL 1980						FALL 1983					
	ALL GRAD DEPTS.		Ph.D. DEPTS.		MASTER'S DEPTS.		ALL GRAD DEPTS.		Ph.D. DEPTS.		MASTER'S DEPTS.	
	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
Total S/E Fields	383,210	34.9	333,658	33.6	49,552	43.6	413,564	37.1	358,276	35.5	55,288	47.3
Engineering	77,174	9.0	72,271	9.1	4,903	7.3	92,717	11.0	85,973	11.0	6,744	11.0
Physical Science	27,063	17.1	25,443	16.6	1,620	25.0	29,448	19.9	27,701	19.4	1,747	28.8
Environ. Science	13,680	22.8	12,349	22.6	1,331	25.1	15,625	25.4	14,283	25.1	1,342	28.6
Math Science	28,873	24.9	24,951	23.8	3,922	31.4	41,357	28.9	33,465	27.7	7,892	33.8
Agric. Science	12,365	23.0	11,644	23.4	721	72.1	12,290	25.3	11,515	25.2	775	25.8
Biological Sci.	47,643	38.8	42,055	38.2	5,588	42.9	46,208	42.4	41,673	41.7	4,535	48.7
Health Science	42,693	71.0	36,953	70.3	5,740	75.2	45,401	75.7	38,107	75.1	7,294	78.9
Psychology	40,544	53.2	29,339	51.6	11,205	62.0	41,134	59.4	29,095	56.3	12,039	66.9
Social Science	93,175	41.7	78,653	41.7	14,522	41.6	89,384	44.7	76,464	44.6	12,920	45.6

SOURCE: Selected data from Academic Science/Engineering: Graduate Enrollment and Support, Fall, 1984, National Science Foundation, October 1985, unpublished

TABLE 1-26

FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD, LEVEL, CITIZENSHIP, SEX, AND TYPE OF CONTROL, FALL 1984

FIELD	TOTAL	LEVEL OF STUDY		CITIZENSHIP		SEX		TYPE OF CONTROL	
		FIRST YEAR	BEYOND FIRST YEAR	U.S.	FOREIGN	MEN	WOMEN	PUBLIC	PRIVATE
TOTAL, ALL FIELDS	264,146	83,893	180,253	199,693	64,452	173,375	90,771	190,066	74,079
ENGINEERING	56,866	19,541	37,325	32,916	23,949	50,526	6,340	39,350	17,516
AEROSPACE	1,840	750	1,090	1,104	736	1,754	86	1,340	500
AGRICULTURAL	776	251	525	446	330	712	64	722	54
BIOMEDICAL	1,106	328	778	886	220	867	239	627	479
CHEMICAL	5,862	1,591	4,271	3,673	2,189	5,134	729	4,071	1,791
CIVIL	10,535	3,883	6,652	6,027	4,507	8,947	1,588	7,782	2,753
ELECTRICAL	14,066	5,207	8,860	7,906	6,161	12,909	1,157	9,073	4,993
ENGINEERING SCIENCE	1,273	373	901	789	484	1,131	143	641	632
INDUSTRIAL	4,176	1,530	2,646	2,517	1,659	3,331	842	2,822	1,354
MECHANICAL	8,738	3,155	5,583	4,657	4,081	8,192	546	6,150	2,588
METALLURGICAL/MATERIALS	2,866	723	2,143	1,662	1,204	2,514	352	1,789	1,077
MINING	403	102	301	262	141	366	37	340	63
NUCLEAR	1,018	283	735	606	412	949	69	796	222
PETROLEUM	602	146	456	318	284	551	51	438	164
ENGINEERING, N.E.C.	3,603	1,219	2,384	2,062	1,541	3,168	435	2,759	844
SCIENCES, TOTAL	207,280	64,352	142,928	166,777	40,503	122,849	84,431	150,716	56,564
PHYSICAL SCIENCES	25,666	6,414	19,252	18,187	7,479	20,666	5,001	18,392	7,274
ASTRONOMY	596	129	467	479	117	502	94	394	202
CHEMISTRY	14,996	3,709	11,287	11,429	3,567	11,247	3,749	11,017	3,979
PHYSICS	9,911	2,501	7,410	6,146	3,765	8,811	1,100	6,817	3,094
PHYSICAL SCIENCES, N.E.C.	163	74	89	133	30	105	58	163	0
ENVIRONMENTAL SCIENCES	11,528	3,269	8,259	9,973	1,556	8,740	2,789	9,550	1,978
ATMOSPHERIC SCIENCES	770	222	548	609	161	651	119	744	26
GEOSCIENCES	7,962	2,302	5,661	7,101	861	6,078	1,884	6,405	1,557
OCEANOGRAPHY	1,518	374	1,144	1,221	297	1,101	417	1,264	254
ENVIRONMENTAL SCIENCES, N.E.C.	1,278	372	906	1,041	237	910	368	1,137	141
MATHEMATICAL SCIENCES	11,223	3,678	7,545	6,710	4,513	8,283	2,940	8,415	2,808
COMPUTER SCIENCES	11,448	3,909	7,539	6,941	4,507	8,866	2,582	8,304	3,144
LIFE SCIENCES	69,898	22,055	47,844	59,207	10,692	36,525	33,373	54,591	15,307
AGRICULTURAL SCIENCES	9,745	2,671	7,074	7,270	2,475	7,237	2,508	9,436	309
BIOLOGICAL SCIENCES	37,554	9,892	27,662	31,658	5,896	22,459	15,095	27,687	9,867
ANATOMY	951	256	695	892	59	564	387	616	335
BIOCHEMISTRY	4,255	1,028	3,238	3,418	847	2,676	1,590	2,892	1,373
BIOLOGY	8,873	2,589	6,285	7,753	1,120	5,453	3,420	6,107	2,766
BIOMETRY/EPIDEMIOLOGY	753	240	513	630	123	354	399	494	259
BIOPHYSICS	419	83	336	339	80	314	105	209	210
BOTANY	2,998	683	2,315	2,374	624	1,906	1,092	2,788	210
CELL BIOLOGY	1,269	312	957	1,126	143	794	475	711	558
ECOLOGY	872	173	699	785	87	583	289	809	62
ENTOMOLOGY/PARASITOLOGY	1,264	272	992	1,040	224	942	322	1,210	54
GENETICS	942	231	711	811	131	520	422	698	244
MICROBIOLOGY	3,869	994	2,875	3,287	582	2,189	1,679	2,829	1,040
NUTRITION	3,005	921	2,085	2,114	892	1,086	1,919	2,373	632
PATHOLOGY	1,083	271	812	913	170	674	409	736	347
PHARMACOLOGY	1,935	445	1,490	1,688	247	1,215	720	1,308	627
PHYSIOLOGY	1,983	620	1,363	1,723	260	1,280	703	1,356	627
ZOOLOGY	1,879	439	1,440	1,735	144	1,217	662	1,771	108
BIOSCIENCES, N.E.C.	1,193	337	856	1,029	164	691	502	779	414
HEALTH SCIENCES	22,599	9,491	13,108	20,279	2,320	6,830	15,770	17,468	5,131
DENTISTRY	768	317	451	638	130	609	159	557	211
NEUROLOGY	299	72	227	270	29	191	108	180	119
NURSING	6,110	2,594	3,516	5,936	174	377	5,733	4,638	1,473
PHARMACEUTICAL SCIENCES	1,783	480	1,303	1,138	645	1,193	590	1,521	262
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	3,691	1,962	1,729	3,061	630	1,556	2,135	2,515	1,176
SPEECH PATHOLOGY/AUDIOLOGY	5,044	2,240	2,805	4,828	216	752	4,293	4,370	674
VETERINARY SCIENCES	425	112	313	315	110	265	160	352	73
CLINICAL MEDICINE, N.E.C.	1,039	330	709	917	122	559	480	730	309
HEALTH RELATED, N.E.C.	3,440	1,385	2,055	3,176	264	1,328	2,112	2,605	835
PSYCHOLOGY	25,327	7,134	18,193	24,290	1,036	10,585	14,742	15,705	9,622
SOCIAL SCIENCES	52,190	17,894	34,296	41,469	10,721	29,185	23,005	35,759	16,430
AGRICULTURAL ECONOMICS	2,020	673	1,347	1,256	764	1,607	413	1,918	102
ANTHROPOLOGY	3,975	904	3,071	3,597	378	1,825	2,149	2,802	1,173
ECONOMICS (EXCEPT AGRICULTURAL)	8,976	2,692	6,284	5,454	3,522	6,889	2,088	5,782	3,194
GEOGRAPHY	2,240	700	1,540	1,869	371	1,503	738	2,056	184
HISTORY AND PHILOSOPHY OF SCIENCE	243	59	184	205	38	166	77	126	117
LINGUISTICS	2,285	779	1,506	1,456	829	957	1,327	1,576	709
POLITICAL SCIENCE	12,986	4,774	8,212	10,491	2,495	8,589	4,398	7,727	5,259
SOCIOLOGY	4,767	1,190	3,577	3,692	1,075	2,306	2,460	3,551	1,216
SOCIOLOGY/ANTHROPOLOGY	587	141	446	464	123	320	267	389	198
SOCIAL SCIENCES, N.E.C.	14,110	5,981	8,129	12,984	1,126	5,023	9,087	9,832	4,278

SOURCE: Selected data from Academic Science/Engineering: Graduate Enrollment and Support, Fall, 1984, National Science Foundation, October 1985, unpublished

TABLE 1-27

SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD AND SEX, FALL 1977 AND 1979-1984

FIELD	MEN							WOMEN						
	1977	1979	1980	1981	1982	1983	1984	1977	1979	1980	1981	1982	1983	1984
TOTAL, ALL FIELDS	250,179	246,953	249,328	249,471	252,179	259,990	259,967	108,144	126,248	133,772	142,169	146,803	153,457	155,096
ENGINEERING	65,307	66,235	68,581	72,548	75,621	82,465	86,128	3,835	6,027	6,803	7,931	8,973	10,246	10,758
AEROSPACE	1,485	1,432	1,663	1,816	1,831	2,283	2,280	33	49	74	67	110	128	133
AGRICULTURAL	680	708	711	818	894	894	876	29	32	31	44	57	73	78
BIOMEDICAL	817	919	845	877	897	974	1,017	83	132	166	180	218	270	271
CHEMICAL	4,827	4,991	5,336	5,718	6,288	6,547	6,547	374	414	479	778	901	1,016	964
CIVIL	11,782	11,752	11,973	12,778	12,614	13,388	13,413	960	1,465	1,529	1,737	1,909	2,018	2,164
ELECTRICAL	16,696	16,856	18,244	18,917	20,466	22,829	24,110	710	932	983	1,276	1,951	1,940	2,157
ENGINEERING SCIENCE	1,650	1,540	1,645	1,764	1,864	1,990	1,983	67	91	101	101	266	291	312
INDUSTRIAL	9,683	9,443	8,520	8,466	8,216	8,769	8,713	795	1,281	1,390	1,560	1,684	1,943	2,089
MECHANICAL	8,449	8,782	9,384	9,987	10,748	12,106	12,971	273	469	534	631	719	806	933
METALLURGICAL/MATERIALS	2,376	2,468	2,607	2,795	2,704	2,999	3,163	183	288	303	390	430	448	468
MINING	434	363	385	423	429	477	537	18	26	28	39	40	47	40
NUCLEAR	1,434	1,233	1,160	1,199	1,215	1,119	1,167	87	109	81	84	86	84	87
PETROLEUM	365	393	462	469	544	665	673	14	31	41	52	42	72	89
ENGINEERING, N.E.C.	4,659	5,335	5,676	6,641	7,007	7,423	6,819	259	511	853	892	999	1,114	1,067
SCIENCES, TOTAL	184,872	180,718	180,747	176,923	176,558	177,525	175,838	104,309	120,218	127,269	134,238	137,830	143,211	144,339
PHYSICAL SCIENCES	22,816	22,209	22,352	22,366	22,776	23,594	23,736	4,039	4,495	4,600	5,016	5,423	5,881	6,072
ASTRONOMY	566	571	546	531	526	542	542	81	81	82	91	101	92	97
CHEMISTRY	12,936	12,683	12,718	12,544	12,855	13,297	13,090	3,084	3,418	3,804	3,803	4,160	4,513	4,602
PHYSICS	9,129	8,813	8,950	9,133	9,238	9,609	9,962	804	886	948	1,017	1,068	1,202	1,287
PHYSICAL SCIENCES, N.E.C.	183	138	138	183	152	162	142	70	110	66	105	94	74	86
ENVIRONMENTAL SCIENCES	11,307	10,925	10,940	10,945	11,393	11,634	11,360	2,351	2,929	3,268	3,477	3,781	3,975	3,780
ATMOSPHERIC SCIENCES	850	757	779	788	744	746	759	74	98	110	124	130	134	134
GEOSCIENCES	6,703	6,741	6,743	6,746	7,318	7,808	7,735	1,368	1,791	1,925	2,062	2,203	2,513	2,414
OCEANOGRAPHY	1,602	1,484	1,505	1,529	1,514	1,497	1,387	355	413	487	593	577	564	542
ENVIRONMENTAL SCIENCES, N.E.C.	2,152	1,973	1,913	1,912	1,797	1,563	1,479	934	630	746	738	776	766	658
MATHEMATICAL SCIENCES	11,944	11,027	11,272	11,419	12,109	12,222	11,996	4,125	4,036	4,088	4,496	5,090	5,221	4,969
COMPUTER SCIENCES	7,549	9,367	10,491	12,228	14,366	17,296	17,911	1,999	2,323	3,087	4,209	5,446	6,764	6,375
LIFE SCIENCES	53,658	51,398	51,062	49,353	47,646	46,796	46,695	41,814	48,429	51,442	53,771	55,243	57,032	58,278
AGRICULTURAL SCIENCES	9,453	9,461	9,447	9,370	9,314	9,183	8,964	2,067	2,608	2,807	2,730	3,000	3,107	3,064
BIOLOGICAL SCIENCES	32,712	30,499	29,492	28,210	27,021	26,576	26,706	16,844	18,004	18,398	18,769	19,289	19,515	19,525
ANATOMY	801	726	673	683	669	632	615	387	409	409	389	405	408	431
BIOCHEMISTRY	2,821	2,773	2,732	2,694	2,630	2,658	2,813	1,117	1,261	1,321	1,367	1,494	1,576	1,672
BIOLOGY	11,352	9,991	9,347	8,651	7,873	7,694	7,211	8,653	8,763	8,646	8,952	9,524	9,628	9,586
BIOMETRY/EPIDEMIOLOGY	592	592	648	656	561	547	473	466	535	611	526	605	609	533
BIOPHYSICS	459	428	380	338	330	338	326	111	97	108	129	110	112	107
BOTANY	2,747	2,513	2,429	2,288	2,279	2,201	2,203	1,118	1,145	1,188	1,213	1,315	1,249	1,237
CELL BIOLOGY	542	557	619	651	726	797	827	283	327	346	367	417	435	489
ECOLOGY	782	746	813	730	684	666	780	285	318	368	371	367	341	360
ENTOMOLOGY/PARASITOLOGY	1,325	1,353	1,368	1,308	1,158	1,090	1,066	277	344	354	396	382	385	372
GENETICS	552	508	495	470	461	512	550	478	462	469	467	529	523	462
MICROBIOLOGY	2,832	2,478	2,443	2,309	2,318	2,358	2,512	1,648	1,685	1,739	1,741	1,812	1,866	2,101
NUTRITION	1,439	1,351	1,428	1,386	1,368	1,329	1,328	2,381	2,569	2,697	2,969	2,991	3,066	2,950
PATHOLOGY	899	976	922	882	872	883	872	458	481	507	562	588	579	590
PHARMACOLOGY	1,324	1,419	1,361	1,330	1,266	1,328	1,308	670	585	654	694	728	741	775
PHYSIOLOGY	1,594	1,525	1,467	1,452	1,367	1,297	1,297	528	647	637	692	691	697	778
ZOOLOGY	2,157	1,962	1,764	1,718	1,651	1,609	1,520	919	938	922	907	852	821	869
BIOSCIENCES, N.E.C.	498	603	603	647	668	637	934	265	408	430	481	479	502	616
HEALTH SCIENCES	11,493	11,438	12,123	11,773	11,311	11,037	10,983	22,903	27,817	30,237	32,272	32,954	34,410	35,689
DENTISTRY	847	840	801	716	676	607	664	139	189	201	226	160	169	186
NEUROLOGY	164	178	175	131	140	189	194	69	83	74	60	64	72	109
NURSING	426	578	649	730	717	747	872	10,617	12,218	13,228	14,973	15,527	16,198	18,666
PHARMACEUTICAL SCIENCES	1,754	1,714	1,730	1,797	1,751	1,776	1,711	718	727	704	752	768	865	922
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	2,449	3,090	3,415	3,385	2,986	2,581	2,503	2,086	3,338	3,688	3,841	3,830	3,611	3,634
SPEECH PATHOLOGY/AUDIOLOGY	1,879	1,398	1,316	1,186	1,220	1,199	1,248	6,283	6,898	7,301	7,410	7,463	7,674	6,332
VETERINARY SCIENCES	340	380	332	304	297	289	346	127	165	179	177	174	173	211
CLINICAL MEDICINE, N.E.C.	995	807	823	845	934	847	769	825	1,026	794	745	793	741	741
HEALTH RELATED, N.E.C.	2,639	2,453	2,884	2,659	2,570	2,802	2,677	2,439	3,585	4,068	4,088	4,165	4,829	4,888
PSYCHOLOGY	20,520	19,427	19,036	17,902	16,980	16,709	16,130	18,108	20,399	21,600	22,789	23,118	24,420	24,527
SOCIAL SCIENCES	57,078	56,369	55,594	52,710	51,288	49,276	48,053	32,313	37,647	39,184	40,480	39,729	39,918	40,366
AGRICULTURAL ECONOMICS	1,928	1,827	1,874	1,791	1,804	1,807	1,787	391	394	469	471	463	488	483
ANTHROPOLOGY	3,386	3,099	3,009	2,791	2,677	2,488	2,459	3,342	3,244	3,313	3,327	3,271	3,204	3,127
ECONOMICS (EXCEPT AGRICULTURAL)	9,749	9,498	10,126	10,139	10,237	10,159	10,013	2,314	2,632	3,006	3,205	3,498	3,428	3,235
GEOGRAPHY	2,916	2,146	2,267	2,198	2,195	2,051	2,020	859	897	937	989	971	1,009	1,044
HISTORY AND PHILOSOPHY OF SCIENCE	215	191	189	159	167	161	187	85	74	91	89	89	92	87
LINGUISTICS	1,251	1,376	1,325	1,349	1,180	1,217	1,231	1,417	1,687	1,682	1,790	1,623	1,805	1,797
POLITICAL SCIENCE	19,795	20,540	20,340	19,255	18,631	17,431	16,567	7,404	10,198	10,872	11,536	11,276	10,872	10,307
SOCIOLOGY	4,834	4,243	3,984	3,780	3,376	3,269	3,144	4,030	3,916	4,017	4,036	3,870	3,680	3,619
SOCIOLOGY/ANTHROPOLOGY	900	663	648	644	553	583	526	498	673	758	866	580	599	528
SOCIAL SCIENCES, N.E.C.	12,504	12,786	11,832	10,704	10,468	10,158	10,119	12,073	14,039	14,239	14,471	14,088	14,739	16,141

SOURCE: Selected Data on Graduate Science/Engineering Students and Postdoctorates, Fall, 1984, National Science Foundation, October 1985, unpublished

TABLE 1-28

FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD, CITIZENSHIP AND RACIAL/ETHNIC BACKGROUND, FALL 1984

FIELD	TOTAL	U.S. CITIZENS						FOREIGN
		BLACK NON-HISPANIC	AMERICAN INDIAN/ ALASKAN NATIVE	ASIAN/ PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	OTHER OR UNKNOWN	
TOTAL, ALL FIELDS	415,063	14,839	1,124	11,365	11,076	272,635	28,042	75,982
ENGINEERING	94,886	1,520	221	3,829	1,658	50,239	8,832	28,588
AEROSPACE	2,413	14	0	63	21	1,229	287	799
AGRICULTURAL	954	7	0	6	10	549	14	368
BIOMEDICAL	1,288	19	6	63	19	915	20	246
CHEMICAL	7,510	71	9	319	187	4,111	404	2,409
CIVIL	15,578	208	18	458	356	7,828	1,399	5,312
ELECTRICAL	26,267	427	70	1,430	422	12,594	3,612	7,712
ENGINEERING SCIENCE	2,294	44	7	73	15	1,510	107	539
INDUSTRIAL	10,801	342	30	294	332	6,731	986	2,087
MECHANICAL	13,904	170	30	522	127	7,101	1,035	4,919
METALLURGICAL/MATERIALS	3,608	29	27	112	32	1,954	172	1,282
MINING	477	1	1	6	2	280	40	147
NUCLEAR	1,234	20	2	36	15	676	35	450
PETROLEUM	732	3	0	21	9	362	44	293
ENGINEERING, N.E.C.	7,825	165	21	426	112	4,400	678	2,024
SCIENCES, TOTAL	320,177	13,319	903	7,537	9,418	222,396	19,210	47,394
PHYSICAL SCIENCES	29,808	592	77	890	539	18,331	1,477	7,902
ASTRONOMY	639	9	1	4	6	432	65	122
CHEMISTRY	17,692	421	38	631	427	11,497	844	3,834
PHYSICS	11,249	146	36	251	103	6,248	550	3,915
PHYSICAL SCIENCES, N.E.C.	228	16	2	3	4	154	17	31
ENVIRONMENTAL SCIENCES	15,110	108	23	175	284	11,550	1,204	1,766
ATMOSPHERIC SCIENCES	895	13	0	28	10	592	72	180
GEOSCIENCES	10,150	51	13	111	119	7,859	1,032	965
OCEANOGRAPHY	1,929	18	3	25	71	1,442	43	327
ENVIRONMENTAL SCIENCES, N.E.C.	2,136	26	7	11	84	1,657	57	294
MATHEMATICAL SCIENCES	16,963	396	31	525	295	9,475	1,101	5,140
COMPUTER SCIENCES	24,287	541	43	1,108	252	12,448	3,683	6,211
LIFE SCIENCES	104,933	3,425	267	2,526	2,598	80,793	3,273	12,052
AGRICULTURAL SCIENCES	12,030	141	21	144	311	8,494	225	2,693
BIOLOGICAL SCIENCES	46,230	1,132	89	1,315	853	35,062	1,237	6,541
ANATOMY	1,046	13	2	39	15	907	7	63
BIOCHEMISTRY	4,486	58	8	174	77	3,226	74	868
BIOLOGY	12,397	509	29	294	356	9,531	350	1,329
BIOMETRY/EPIDEMIOLOGY	1,006	38	6	46	14	749	13	140
BIOPHYSICS	433	3	1	18	1	319	9	82
BOTANY	3,441	50	1	63	35	2,547	76	668
CELL BIOLOGY	1,316	9	9	45	11	1,036	61	145
ECOLOGY	1,110	10	1	7	11	965	11	104
ENTOMOLOGY/PARASITOLOGY	1,438	20	2	27	17	1,118	14	240
GENETICS	1,012	21	3	39	12	781	19	137
MICROBIOLOGY	4,612	71	6	156	68	3,507	111	694
NUTRITION	4,278	134	6	133	67	2,721	216	1,002
PATHOLOGY	1,462	25	1	49	27	1,061	106	193
PHARMACOLOGY	2,083	35	1	84	37	1,658	18	250
PHYSIOLOGY	2,175	44	3	69	34	1,743	17	265
ZOOLOGY	2,385	42	9	26	40	1,964	121	183
BIOSCIENCES, N.E.C.	1,551	51	2	47	30	1,229	13	179
HEALTH SCIENCES	46,673	2,151	156	1,067	1,433	37,236	1,811	2,818
DENTISTRY	850	13	1	27	22	654	0	133
NEUROLOGY	303	1	0	13	4	255	0	30
NURSING	19,537	886	48	301	470	16,913	623	296
PHARMACEUTICAL SCIENCES	2,633	49	4	90	31	1,582	119	758
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	6,137	317	22	227	383	4,035	439	714
SPEECH PATHOLOGY/AUDIOLOGY	7,581	394	47	115	241	6,315	196	272
VETERINARY SCIENCES	557	23	0	14	3	376	12	129
CLINICAL MEDICINE, N.E.C.	1,510	43	3	64	50	1,074	121	155
HEALTH RELATED, N.E.C.	7,565	425	31	216	228	6,032	300	331
PSYCHOLOGY	40,657	2,068	123	566	1,723	31,959	2,842	1,376
SOCIAL SCIENCES	88,419	6,190	339	1,747	3,728	57,839	5,630	12,947
AGRICULTURAL ECONOMICS	2,270	51	8	15	39	1,327	15	815
ANTHROPOLOGY	5,586	88	27	64	125	4,454	376	452
ECONOMICS (EXCEPT AGRICULTURAL)	13,248	414	10	334	250	6,805	1,147	4,288
GEOGRAPHY	3,064	60	7	43	29	2,414	65	446
HISTORY AND PHILOSOPHY OF SCIENCE	274	4	0	2	1	218	11	38
LINGUISTICS	3,027	149	7	84	87	1,635	98	966
POLITICAL SCIENCE	26,873	2,615	98	605	1,563	16,644	2,248	3,100
SOCIOLOGY	6,763	476	41	140	257	4,360	220	1,269
SOCIOLOGY/ANTHROPOLOGY	1,054	127	2	14	19	556	178	158
SOCIAL SCIENCES, N.E.C.	26,260	2,206	138	445	1,357	19,427	1,273	1,414

SOURCE: Selected Data on Graduate Science/Engineering Students and Postdoctorates, Fall, 1984, National Science Foundation, October 1985, unpublished

TABLE 1-29

FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL DOCTORATE-GRANTING INSTITUTIONS BY FIELD, CITIZENSHIP AND RACIAL/ETHNIC BACKGROUND, FALL 1984

FIELD	TOTAL	U.S. CITIZENS						FOREIGN
		BLACK NON-HISPANIC	AMERICAN INDIAN/ ALASKAN NATIVE	ASIAN/ PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	OTHER OR UNKNOWN	
TOTAL, ALL FIELDS	246,848	5,921	624	6,648	5,847	155,029	11,714	61,065
ENGINEERING	54,751	657	104	2,071	724	25,050	3,403	22,742
AEROSPACE	1,840	12	0	31	9	795	257	736
AGRICULTURAL	776	6	0	6	9	424	1	330
BIOMEDICAL	1,106	17	6	60	17	776	10	220
CHEMICAL	5,656	52	7	252	88	2,882	298	2,077
CIVIL	10,282	110	9	251	191	4,627	689	4,415
ELECTRICAL	13,452	196	23	748	193	5,496	1,012	5,784
ENGINEERING SCIENCE	1,256	14	3	34	8	624	89	484
INDUSTRIAL	4,007	74	17	121	77	1,987	129	1,602
MECHANICAL	8,511	84	7	257	64	3,612	517	3,970
METALLURGICAL/MATERIALS	2,863	23	24	102	26	1,400	84	1,204
MINING	403	1	1	5	2	220	33	141
NUCLEAR	1,018	14	2	30	11	516	33	412
PETROLEUM	602	2	0	16	7	259	34	284
ENGINEERING, N.E.C.	2,979	52	5	158	32	1,432	217	1,083
SCIENCES, TOTAL	192,097	5,264	520	4,577	5,123	129,979	8,311	38,323
PHYSICAL SCIENCES	25,149	361	61	687	445	15,007	1,249	7,339
ASTRONOMY	596	8	1	3	6	396	65	117
CHEMISTRY	14,615	247	35	467	349	9,346	681	3,490
PHYSICS	9,802	103	23	215	87	5,169	489	3,716
PHYSICAL SCIENCES, N.E.C.	136	3	2	2	3	96	14	16
ENVIRONMENTAL SCIENCES	11,283	79	16	132	183	8,378	968	1,527
ATMOSPHERIC SCIENCES	770	13	0	24	8	492	72	161
GEOSCIENCES	7,797	39	10	82	64	5,906	838	858
OCEANOGRAPHY	1,518	10	3	21	56	1,089	42	297
ENVIRONMENTAL SCIENCES, N.E.C.	1,198	17	3	5	55	891	16	211
MATHEMATICAL SCIENCES	10,591	134	4	244	168	5,186	559	4,296
COMPUTER SCIENCES	10,117	128	36	454	99	4,676	725	3,999
LIFE SCIENCES	66,221	1,380	155	1,759	1,663	49,518	1,599	10,147
AGRICULTURAL SCIENCES	9,327	88	17	116	184	6,535	83	2,304
BIOLOGICAL SCIENCES	35,980	610	63	1,090	647	27,163	776	5,631
ANATOMY	951	12	2	38	13	821	6	59
BIOCHEMISTRY	4,262	54	8	162	74	3,060	57	847
BIOLOGY	7,765	155	12	194	250	5,985	175	994
BIOMETRY/EPIDEMIOLOGY	753	32	4	37	9	535	13	123
BIOPHYSICS	419	3	1	17	1	308	9	80
BOTANY	2,969	35	1	59	29	2,170	63	612
CELL BIOLOGY	1,269	9	9	44	10	996	60	143
ECOLOGY	865	8	1	7	8	753	1	87
ENTOMOLOGY/PARASITOLOGY	1,264	18	1	24	15	976	6	224
GENETICS	942	19	3	36	10	727	16	131
MICROBIOLOGY	3,790	62	4	136	60	2,922	75	531
NUTRITION	2,927	50	3	97	41	1,733	143	860
PATHOLOGY	1,081	19	0	46	21	801	26	168
PHARMACOLOGY	1,928	28	1	73	34	1,537	15	240
PHYSIOLOGY	1,983	42	3	66	33	1,570	9	260
ZOOLOGY	1,844	35	8	22	29	1,507	99	144
BIOSCIENCES, N.E.C.	968	29	2	32	10	764	3	128
HEALTH SCIENCES	20,914	682	75	553	832	15,820	740	2,212
DENTISTRY	768	10	1	26	17	584	0	130
NEUROLOGY	299	1	0	13	4	252	0	29
NURSING	5,682	198	18	91	183	4,654	378	160
PHARMACEUTICAL SCIENCES	1,756	28	1	55	25	971	37	639
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	3,691	153	19	162	317	2,266	144	630
SPEECH PATHOLOGY/AUDIOLOGY	4,483	149	19	86	153	3,849	30	197
VETERINARY SCIENCES	402	5	0	6	2	282	0	107
CLINICAL MEDICINE, N.E.C.	975	19	3	42	34	677	94	106
HEALTH RELATED, N.E.C.	2,858	119	14	72	97	2,285	57	214
PSYCHOLOGY	21,603	861	60	319	940	17,217	1,286	920
SOCIAL SCIENCES	47,133	2,321	188	982	1,625	29,997	1,925	10,095
AGRICULTURAL ECONOMICS	1,971	33	8	14	32	1,147	11	726
ANTHROPOLOGY	3,900	64	16	44	77	3,164	157	378
ECONOMICS (EXCEPT AGRICULTURAL)	8,642	158	4	214	151	4,295	441	3,379
GEOGRAPHY	1,997	31	7	22	19	1,537	22	359
HISTORY AND PHILOSOPHY OF SCIENCE	243	4	0	2	1	187	11	38
LINGUISTICS	2,264	77	5	60	41	1,218	34	829
POLITICAL SCIENCE	11,058	726	42	235	423	6,739	668	2,225
SOCIOLOGY	4,444	190	27	109	151	2,830	109	1,028
SOCIOLOGY/ANTHROPOLOGY	572	60	2	9	11	325	44	121
SOCIAL SCIENCES, N.E.C.	12,042	978	77	273	719	8,555	428	1,012

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1985, Summary Tables, National Science Foundation, 1986

TABLE 1-30

FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY AREA, CITIZENSHIP AND RACE/ETHNICITY, FALL 1980-1984

AREA, CITIZENSHIP, AND RACIAL/ETHNIC BACKGROUND	FULL TIME				
	1980	1981	1982	1983	1984
TOTAL, ALL AREAS:	249,159	252,997	255,297	263,750	264,146
TOTAL US CITIZENS	198,429	198,015	197,376	200,966	199,693
BLACK, NON-HISPANIC	6,607	6,344	7,225	7,474	7,580
AMERICAN INDIAN/ALASKAN NATIVE	661	516	712	774	754
ASIAN/PACIFIC ISLANDER	5,394	4,925	5,657	6,460	7,171
HISPANIC	4,922	4,521	5,496	6,486	6,640
WHITE, NON-HISPANIC	149,481	141,674	159,171	168,096	166,661
OTHER OR UNKNOWN	31,364	40,035	19,113	11,676	12,917
FOREIGN	50,730	54,982	57,923	62,784	64,452
ENGINEERING:	43,107	46,257	50,239	55,152	56,866
TOTAL US CITIZENS	25,108	26,443	28,816	32,139	32,916
BLACK, NON-HISPANIC	472	425	519	666	708
AMERICAN INDIAN/ALASKAN NATIVE	26	66	76	101	135
ASIAN/PACIFIC ISLANDER	1,506	1,118	1,419	1,759	2,135
HISPANIC	572	492	601	785	810
WHITE, NON-HISPANIC	18,603	18,411	21,677	25,194	25,601
OTHER OR UNKNOWN	3,929	5,931	4,524	3,634	3,528
FOREIGN	17,999	19,814	21,423	23,013	23,949
SCIENCES, TOTAL:	206,052	206,740	205,058	208,598	207,280
TOTAL US CITIZENS	173,321	171,572	168,558	168,827	166,777
BLACK, NON-HISPANIC	6,135	5,919	6,706	6,808	6,872
AMERICAN INDIAN/ALASKAN NATIVE	635	450	636	677	589
ASIAN/PACIFIC ISLANDER	3,888	3,807	4,238	4,701	5,036
HISPANIC	4,350	4,029	4,895	5,701	5,830
WHITE, NON-HISPANIC	130,878	123,263	137,494	142,902	139,060
OTHER OR UNKNOWN	27,435	34,104	14,589	8,042	9,389
FOREIGN	32,731	35,168	36,500	39,771	40,503
PHYSICAL SCIENCES:	22,918	23,308	24,040	25,213	25,666
TOTAL US CITIZENS	17,174	17,037	17,556	17,981	18,187
BLACK, NON-HISPANIC	323	328	418	412	430
AMERICAN INDIAN/ALASKAN NATIVE	13	15	32	40	63
ASIAN/PACIFIC ISLANDER	513	485	532	590	751
HISPANIC	305	324	387	449	464
WHITE, NON-HISPANIC	13,919	13,549	14,742	15,478	15,182
OTHER OR UNKNOWN	2,101	2,336	1,444	1,012	1,289
FOREIGN	5,744	6,271	6,485	7,232	7,479
ENVIRONMENTAL SCIENCES:	10,969	11,038	11,436	12,089	11,528
TOTAL US CITIZENS	9,570	9,534	9,789	10,391	9,973
BLACK, NON-HISPANIC	66	71	76	83	84
AMERICAN INDIAN/ALASKAN NATIVE	38	10	17	24	18
ASIAN/PACIFIC ISLANDER	143	101	136	158	134
HISPANIC	115	130	132	146	206
WHITE, NON-HISPANIC	7,523	7,114	8,388	9,340	8,546
OTHER OR UNKNOWN	1,685	2,108	1,040	632	985
FOREIGN	1,399	1,504	1,647	1,698	1,556
MATHEMATICAL SCIENCES:	9,902	10,154	10,823	10,971	11,223
TOTAL US CITIZENS	6,648	6,513	6,935	6,726	6,710
BLACK, NON-HISPANIC	141	138	174	164	183
AMERICAN INDIAN/ALASKAN NATIVE	28	4	20	12	4
ASIAN/PACIFIC ISLANDER	205	246	298	337	296
HISPANIC	140	162	174	205	191
WHITE, NON-HISPANIC	5,042	4,793	5,571	5,589	5,453
OTHER OR UNKNOWN	1,095	1,169	698	419	583
FOREIGN	3,254	3,641	3,888	4,245	4,513
COMPUTER SCIENCES:	6,587	7,445	9,171	10,728	11,448
TOTAL US CITIZENS	4,521	4,887	5,981	6,732	6,961
BLACK, NON-HISPANIC	67	103	198	207	197
AMERICAN INDIAN/ALASKAN NATIVE	7	3	15	11	34
ASIAN/PACIFIC ISLANDER	200	264	365	558	520
HISPANIC	62	54	105	105	111
WHITE, NON-HISPANIC	2,793	3,428	4,339	5,055	5,028
OTHER OR UNKNOWN	1,412	1,035	959	796	1,049
FOREIGN	2,066	2,558	3,190	3,996	4,507

AREA, CITIZENSHIP, AND RACIAL/ETHNIC BACKGROUND	FULL TIME				
	1980	1981	1982	1983	1984
LIFE SCIENCES, TOTAL:	72,409	72,241	70,354	70,184	69,898
TOTAL US CITIZENS	63,543	62,857	60,522	59,763	59,207
BLACK, NON-HISPANIC	1,623	1,442	1,697	1,735	1,755
AMERICAN INDIAN/ALASKAN NATIVE	172	127	191	222	174
ASIAN/PACIFIC ISLANDER	1,644	1,391	1,622	1,694	1,826
HISPANIC	1,451	977	1,338	1,776	1,815
WHITE, NON-HISPANIC	50,716	47,740	51,880	52,582	51,923
OTHER OR UNKNOWN	7,927	11,180	3,794	1,754	1,714
FOREIGN	8,866	9,384	9,732	10,423	10,692
AGRICULTURAL SCIENCES:	9,980	10,076	9,891	9,836	9,745
TOTAL US CITIZENS	7,754	7,701	7,508	7,368	7,270
BLACK, NON-HISPANIC	91	92	123	112	111
AMERICAN INDIAN/ALASKAN NATIVE	19	9	12	20	17
ASIAN/PACIFIC ISLANDER	125	97	117	113	127
HISPANIC	221	134	164	182	215
WHITE, NON-HISPANIC	6,269	6,328	6,556	6,490	6,703
OTHER OR UNKNOWN	1,029	1,041	536	251	96
FOREIGN	2,226	2,375	2,383	2,468	2,475
BIOLOGICAL SCIENCES:	37,928	37,582	36,989	37,110	37,354
TOTAL US CITIZENS	33,340	32,727	31,950	31,586	31,658
BLACK, NON-HISPANIC	715	652	784	841	804
AMERICAN INDIAN/ALASKAN NATIVE	48	33	67	90	97
ASIAN/PACIFIC ISLANDER	937	805	906	1,025	1,119
HISPANIC	609	457	618	720	707
WHITE, NON-HISPANIC	27,047	25,470	27,761	28,027	28,127
OTHER OR UNKNOWN	3,984	5,310	1,814	883	834
FOREIGN	4,588	4,855	5,039	5,524	5,696
HEALTH SCIENCES:	24,501	24,583	23,374	23,240	22,599
TOTAL US CITIZENS	22,449	22,429	21,044	20,809	20,279
BLACK, NON-HISPANIC	827	698	790	782	840
AMERICAN INDIAN/ALASKAN NATIVE	105	85	112	112	90
ASIAN/PACIFIC ISLANDER	582	489	599	554	580
HISPANIC	621	386	556	874	892
WHITE, NON-HISPANIC	17,400	15,942	17,563	17,865	17,094
OTHER OR UNKNOWN	2,914	4,829	1,444	620	784
FOREIGN	2,052	2,154	2,330	2,431	2,320
PSYCHOLOGY:	26,492	26,725	25,818	26,759	25,327
TOTAL US CITIZENS	25,482	25,721	24,739	25,667	24,290
BLACK, NON-HISPANIC	1,017	983	1,021	1,148	1,129
AMERICAN INDIAN/ALASKAN NATIVE	185	48	78	92	86
ASIAN/PACIFIC ISLANDER	302	328	319	368	404
HISPANIC	971	955	1,032	1,144	1,140
WHITE, NON-HISPANIC	17,612	16,001	19,198	21,379	20,072
OTHER OR UNKNOWN	5,395	7,406	3,091	1,537	1,460
FOREIGN	1,210	1,004	1,079	1,092	1,036
SOCIAL SCIENCES:	56,575	55,829	53,516	52,652	52,190
TOTAL US CITIZENS	46,383	45,023	43,037	41,567	41,469
BLACK, NON-HISPANIC	2,888	2,854	3,122	3,048	3,085
AMERICAN INDIAN/ALASKAN NATIVE	199	242	283	271	208
ASIAN/PACIFIC ISLANDER	881	992	966	999	1,106
HISPANIC	1,226	1,427	1,727	1,874	1,904
WHITE, NON-HISPANIC	33,273	30,638	33,376	33,471	32,857
OTHER OR UNKNOWN	7,820	8,870	3,563	1,894	2,309
FOREIGN	10,192	10,806	10,479	11,085	10,721

SOURCE: Selected Data on Graduate Science/Engineering Students and Postdoctorates, Fall, 1984, National Science Foundation, October 1985, unpublished

TABLE 1-31

FOREIGN FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD, 1977 AND 1979–84

FIELD	NUMBER							AVERAGE ANNUAL PERCENT CHANGE		
	1977	1979	1980	1981	1982	1983	1984	1977–83	1983–84	1977–84
TOTAL, ALL FIELDS	38,448	46,887	50,730	54,979	57,923	62,784	64,452	8.5	2.7	7.7
ENGINEERING	13,643	16,660	17,999	19,814	21,423	23,013	23,949	9.1	4.1	8.4
AEROSPACE	476	521	568	601	577	752	736	7.9	-2.1	6.4
AGRICULTURAL	285	274	293	298	341	341	330	3.0	-3.2	2.1
BIOMEDICAL	116	131	135	158	199	195	220	9.0	12.8	9.6
CHEMICAL	1,600	1,864	1,990	2,202	2,341	2,239	2,189	5.8	-2.2	4.6
CIVIL	2,398	3,145	3,375	3,740	4,050	4,388	4,507	10.6	2.7	9.4
ELECTRICAL	3,093	3,865	4,297	4,785	5,112	5,807	6,161	11.1	6.1	10.3
ENGINEERING SCIENCE	337	307	363	372	440	497	484	6.7	-2.6	5.3
INDUSTRIAL	1,243	1,414	1,456	1,595	1,626	1,522	1,659	3.4	9.0	4.2
MECHANICAL	1,892	2,429	2,630	3,059	3,500	4,003	4,081	13.3	2.0	11.6
METALLURGICAL/MATERIALS	765	1,025	1,107	1,112	1,181	1,174	1,204	7.4	2.6	6.7
MINING	153	113	139	155	122	155	141	.2	-9.0	-1.2
NUCLEAR	391	444	443	427	473	461	412	2.8	-10.6	.8
PETROLEUM	201	232	213	195	260	290	284	6.3	-2.1	5.1
ENGINEERING, N.E.C.	693	896	990	1,115	1,201	1,189	1,541	9.4	29.6	12.1
SCIENCES, TOTAL	24,805	30,227	32,731	35,165	36,500	39,771	40,503	8.2	1.8	7.3
PHYSICAL SCIENCES	4,696	5,347	5,744	6,271	6,485	7,232	7,479	7.5	3.4	6.9
ASTRONOMY	71	81	84	93	102	105	117	6.7	11.4	7.4
CHEMISTRY	2,587	2,859	2,983	3,217	3,216	3,525	3,567	5.3	1.2	4.7
PHYSICS	2,023	2,393	2,665	2,950	3,157	3,584	3,765	10.0	5.0	9.3
PHYSICAL SCIENCES, N.E.C.	15	14	12	11	10	18	30	3.1	66.7	10.4
ENVIRONMENTAL SCIENCES	1,139	1,322	1,399	1,504	1,647	1,698	1,556	6.9	-8.4	6.6
ATMOSPHERIC SCIENCES	128	149	144	179	187	182	161	6.0	-11.5	3.3
GEOSCIENCES	709	755	816	885	913	923	861	4.5	-6.7	2.8
OCEANOGRAPHY	150	185	208	246	340	377	297	16.6	-21.2	10.3
ENVIRONMENTAL SCIENCES, N.E.C.	152	233	231	194	207	216	237	6.0	9.7	6.6
MATHEMATICAL SCIENCES	2,455	2,896	3,254	3,641	3,888	4,245	4,513	9.6	6.3	9.1
COMPUTER SCIENCES	1,109	1,771	2,066	2,558	3,190	3,996	4,507	23.8	12.8	22.2
LIFE SCIENCES	7,123	8,621	8,866	9,381	9,732	10,423	10,692	6.6	2.6	6.0
AGRICULTURAL SCIENCES	1,888	2,141	2,226	2,375	2,383	2,468	2,475	4.6	.3	3.9
BIOLOGICAL SCIENCES	3,848	4,440	4,588	4,852	5,039	5,524	5,896	6.2	6.7	6.3
ANATOMY	66	82	83	86	88	74	59	1.9	-20.3	-1.6
BIOCHEMISTRY	433	443	509	594	658	775	847	10.2	9.3	10.1
BIOLOGY	676	849	868	883	851	995	1,120	6.7	12.6	7.5
BIOMETRY/EPIDEMIOLOGY	92	130	144	160	150	157	123	9.3	-21.7	4.2
BIOPHYSICS	84	72	56	61	70	80	80	-.8	.0	-.7
BOTANY	485	525	535	539	595	612	624	4.0	2.0	3.7
CELL BIOLOGY	63	65	67	82	103	128	143	12.5	11.7	12.4
ECOLOGY	32	53	67	73	80	78	87	16.0	11.5	15.4
ENTOMOLOGY/PARASITOLOGY	234	225	227	263	227	240	224	.4	-6.7	-.6
GENETICS	106	94	98	92	114	145	131	5.4	-9.7	3.1
MICROBIOLOGY	313	391	418	418	435	511	582	8.5	13.8	9.3
NUTRITION	707	777	781	834	841	821	892	2.5	8.6	3.4
PATHOLOGY	113	149	163	184	174	206	170	10.5	-17.6	6.0
PHARMACOLOGY	183	195	186	199	243	235	247	7.4	5.1	7.1
PHYSIOLOGY	111	178	171	180	188	212	260	11.4	22.6	12.9
ZOOLOGY	128	137	136	130	131	142	144	1.7	1.4	1.7
BIOSCIENCES, N.E.C.	52	75	79	74	91	113	164	13.8	45.1	17.8
HEALTH SCIENCES	1,387	2,040	2,052	2,156	2,310	2,431	2,320	9.8	-4.6	7.6
DENTISTRY	138	211	223	173	129	122	130	-2.0	6.6	-.8
NEUROLOGY	14	13	15	15	14	27	29	11.6	7.4	11.0
NURSING	147	186	181	225	202	159	174	1.3	9.3	2.4
PHARMACEUTICAL SCIENCES	427	479	463	539	587	629	645	6.7	2.5	6.1
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	249	508	584	580	695	672	630	18.0	-6.3	14.2
SPEECH PATHOLOGY/AUDIOLOGY	113	230	209	224	213	261	216	15.0	-17.1	9.7
VETERINARY SCIENCES	100	129	113	118	93	111	110	1.8	-.9	1.4
CLINICAL MEDICINE, N.E.C.	112	105	106	116	150	168	122	7.0	-27.6	1.2
HEALTH RELATED, N.E.C.	87	179	158	164	227	282	264	21.7	-6.3	17.2
PSYCHOLOGY	742	1,148	1,210	1,004	1,079	1,092	1,036	6.7	-5.1	4.9
SOCIAL SCIENCES	7,541	9,122	10,192	10,806	10,479	11,085	10,721	6.6	-3.3	5.2
AGRICULTURAL ECONOMICS	640	667	754	770	702	765	764	3.0	-.1	2.6
ANTHROPOLOGY	291	334	396	428	386	402	378	5.5	-6.0	3.8
ECONOMICS (EXCEPT AGRICULTURAL)	2,821	3,128	3,499	3,674	3,554	3,560	3,522	4.0	-1.1	3.2
GEOGRAPHY	248	343	383	370	391	386	371	7.7	-3.9	5.9
HISTORY AND PHILOSOPHY OF SCIENCE	25	30	25	30	35	40	38	8.1	-5.0	6.2
LINGUISTICS	465	617	743	753	710	850	829	10.6	-2.5	8.6
POLITICAL SCIENCE	1,591	2,109	2,356	2,509	2,519	2,751	2,695	9.6	-2.3	6.6
SOCIOLOGY	697	828	924	1,044	985	1,101	1,075	7.9	-2.4	6.4
SOCIOLOGY/ANTHROPOLOGY	79	111	103	101	134	129	123	8.5	-4.9	6.5
SOCIAL SCIENCES, N.E.C.	684	955	1,009	1,127	1,063	1,101	1,126	8.3	2.3	7.4

SOURCE: Institute of International Education, Open Doors, 1985

TABLE 1-32

FOREIGN STUDENTS ENROLLED IN U.S. EDUCATIONAL INSTITUTIONS, BY FIELD, 1983-84 AND 1984-85

Field of study	1983-1984		1984-1985	
	Number of foreign students	Proportion of foreign students	Number of foreign students	Proportion of foreign students
Agriculture	8,260	2.4%	7,540	2.2%
Allied health	2,820	0.8%	3,060	0.9%
Architecture & environmental design	6,500	2.0%	6,340	1.9%
Area & ethnic studies	970	0.3%	1,020	0.3%
Business & management	63,000	18.6%	64,930	19.0%
Communications	3,710	1.1%	4,060	1.2%
Communications technologies	480	0.2%	390	0.1%
Computer & information sciences	22,920	6.8%	27,520	8.0%
Education	12,360	3.6%	12,140	3.6%
Engineering	78,160	23.1%	75,370	22.0%
English language	11,390	3.4%	11,010	3.2%
Foreign languages	2,790	0.8%	2,850	0.8%
Health sciences	10,400	3.1%	10,350	3.0%
Home economics	2,020	0.6%	1,870	0.5%
Industrial arts	790	0.2%	860	0.3%
Law	1,480	0.4%	1,720	0.5%
Letters	5,880	1.7%	6,250	1.8%
Liberal & general studies	10,560	3.1%	9,440	2.8%
Library & archival sciences	570	0.2%	610	0.2%
Life sciences	9,400	2.8%	9,950	2.9%
Mathematics	7,930	2.3%	8,110	2.4%
Military sciences	—	—	130	—
Military technologies	360	0.1%	90	—
Multi/interdisciplinary studies	2,160	0.6%	2,400	0.7%
Parks & recreation	180	—	200	—
Personal & sccial development	1,440	0.4%	1,320	0.4%
Philosophy & religion	1,300	0.4%	1,300	0.4%
Physical sciences	15,310	4.5%	15,020	4.4%
Protective services	570	0.2%	570	0.2%
Psychology	3,340	1.0%	3,240	0.9%
Public affairs	3,040	0.9%	2,600	0.8%
Science technologies	1,090	0.3%	990	0.3%
Social sciences	16,380	4.8%	17,370	5.1%
Theology	2,640	0.8%	2,630	0.8%
Visual & performing arts	7,880	2.3%	8,700	2.5%
Vocational home economics	—	—	220	0.1%
Undeclared	20,550	6.1%	19,940	5.8%
Total	338,890	100.0%	342,110	100.0%

SOURCE: Academic Science/Engineering: Graduate Enrollment and Support, Fall, 1985 National Science Foundation, NSF 85-300

TABLE 1-33

FULL-TIME SCIENCE AND ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY SEX, SOURCE OF MAJOR SUPPORT, AND AREA OF STUDY: 1985

	Total S/E		Engineering		Physical Sciences		Environmental Sciences		Math/Computer Sciences		Life Sciences		Psychology Sciences		Social Sciences	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MEN																
All Sources	172,251	100.0	49,196	100.0	20,365	100.0	9,032	100.0	16,093	100.0	36,521	100.0	11,413	100.0	29,631	100.0
Federal Total	33,803	19.6	10,982	22.3	6,780	33.3	2,211	24.5	1,636	10.2	8,921	24.4	1,016	8.9	2,257	7.6
DoD	6,285	3.7	3,811	7.8	716	3.5	314	3.5	709	4.4	305	0.8	117	1.0	313	1.1
HHS Total	7,633	4.4	450	0.9	1,152	5.7	38	0.4	56	0.4	5,272	14.4	456	4.0	209	0.7
NIH	6,642	3.9	373	0.8	1,074	5.3	21	0.2	41	0.3	4,758	13.0	255	2.2	120	0.4
Other	992	0.6	77	0.2	78	0.4	17	0.2	15	0.1	514	1.4	201	1.8	89	0.3
NSF	7,757	4.5	2,453	5.0	2,744	13.5	1,000	11.1	524	3.3	713	2.0	99	0.9	224	0.8
All Other Federal	12,128	7.0	4,268	8.7	2,168	10.7	859	9.5	347	2.2	2,631	7.2	344	3.0	1,511	5.1
Institutional	66,821	38.8	14,662	29.8	10,734	52.7	3,086	34.2	7,889	49.0	14,430	39.5	4,325	37.9	11,694	39.5
Other Outside	19,371	11.3	7,437	15.1	1,383	6.8	1,045	11.6	1,059	6.6	4,804	13.2	628	5.5	3,015	10.2
All Other U.S.	11,751	6.8	5,107	10.4	997	4.9	760	8.4	585	3.6	2,554	7.0	595	5.2	1,153	3.9
Foreign	7,620	4.4	2,330	4.7	386	1.9	285	3.2	474	3.0	2,250	6.2	33	0.3	1,862	6.3
Self Support	52,256	30.3	16,115	32.8	1,468	7.2	2,690	29.8	5,509	34.2	8,366	22.9	5,444	47.7	12,664	42.7
WOMEN																
All Sources	91,549	100.0	6,034	100.0	4,832	100.0	3,019	100.0	5,567	100.0	33,684	100.0	15,351	100.0	23,062	100.0
Federal Total	14,808	16.2	1,026	17.0	1,345	27.8	671	22.2	256	4.6	8,777	26.1	1,127	7.3	1,606	7.0
DoD	759	0.8	198	3.3	115	2.4	51	1.7	78	1.4	213	0.6	57	0.4	47	0.2
HHS Total	7,653	8.4	125	2.1	383	7.9	14	0.5	14	0.3	6,137	18.2	568	3.7	412	1.8
NIH	4,331	4.7	104	1.7	363	7.5	4	0.1	13	0.2	3,300	9.8	345	2.3	202	0.9
Other	3,322	3.6	21	0.4	20	0.4	10	0.3	1	*	2,837	8.4	223	1.5	210	0.9
NSF	1,780	1.9	229	3.8	471	9.6	323	10.7	85	1.5	455	1.4	93	0.6	124	0.5
All Other Federal	4,616	5.0	474	3.9	376	7.8	283	9.4	79	1.4	1,972	5.9	409	2.7	1,023	4.4
Institutional	34,301	37.5	1,971	32.7	2,876	59.5	1,172	38.8	2,834	50.9	11,112	33.0	5,523	36.0	8,813	38.2
Other Outside	5,961	6.5	796	13.2	311	6.4	248	4.2	286	5.1	2,182	6.5	720	4.7	1,412	6.1
All Other U.S.	4,531	5.0	680	11.3	230	4.8	222	7.4	165	3.0	1,632	4.9	689	4.5	913	4.0
Foreign	1,430	1.6	116	1.9	81	1.7	26	0.9	121	2.2	550	1.6	37	0.2	499	2.2
Self Support	36,479	39.9	2,241	37.1	300	6.2	928	30.7	2,191	39.4	11,613	34.5	7,975	52.0	11,231	48.7

*Less than 0.1%.

CHAPTER 2

GENERAL DEGREES

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SOURCE: Doctorate Records File, National Research Council

TABLE 2-1

NUMBER AND PERCENT OF DOCTORAL DEGREES AWARDED TO WOMEN BY FIELD AND DECADE, 1920-1984

FIELD	DECADE															
	1920-29		1930-39		1940-49		1950-59		1960-69		1970-79		1980-84		1920-84	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
PHYSICAL SCIENCES	247	7.5	442	6.6	406	5.0	685	3.7	1,577	4.6	3,946	8.2	2,586	13.3	9,889	7.1
Math	51	14.5	115	14.8	89	10.7	115	5.0	364	5.7	1,092	10.1	531	14.8	2,355	9.4
Physics & Astronomy	39	5.9	51	3.8	62	4.2	98	2.0	213	2.2	532	3.9	377	7.5	1,372	5.7
Chemistry	141	7.3	254	6.4	223	4.2	443	4.4	931	6.4	1,888	10.4	1,378	16.5	5,258	8.4
Earth & Environmental Sciences	16	4.8	22	3.5	32	5.7	31	1.9	69	2.0	348	5.8	426	14.0	944	6.0
COMPUTER SCIENCES											38	11.5	139	11.1	177	11.2
ENGINEERING	2	0.9	6	0.7	7	0.5	20	0.3	77	0.4	424	1.4	589	4.4	1,125	1.5
LIFE SCIENCES	378	15.9	765	15.1	738	12.7	1,318	9.1	3,078	11.6	8,921	18.1	7,832	28.3	23,025	17.6
Biological	341	19.5	698	17.8	699	15.7	1,174	11.8	2,739	15.1	7,069	21.6	5,418	30.2	18,137	20.4
Agricultural	8	2.2	11	1.6	5	0.6	36	1.1	80	1.4	496	5.0	740	15.0	1,376	4.9
Medical/Health	29	10.9	56	12.4	34	6.9	108	8.1	259	9.5	1,303	21.2	1,674	37.9	3,481	22.0
SOCIAL SCIENCES	325	17.1	562	15.8	580	14.5	1,510	11.0	3,604	14.3	14,641	24.5	11,508	37.2	32,625	23.5
Anthropology/Sociology	40	16.4	117	20.4	121	17.0	311	15.4	660	18.6	3,258	35.7	1,939	42.3	6,446	30.1
Economics	52	8.5	71	6.4	83	7.1	125	4.2	245	4.6	734	8.8	535	14.0	1,865	7.9
Political Sci. & Public Admin.	26	9.0	45	8.5	45	7.8	87	5.4	257	8.2	1,043	14.3	606	21.3	2,136	13.2
Psychology	189	29.4	290	26.0	302	24.1	911	14.8	2,264	20.7	8,361	32.2	7,402	55.9	19,719	31.7
ARTS & HUMANITIES	619	25.7	1,291	24.5	1,182	22.9	1,758	15.5	4,423	19.5	14,625	31.4	7,701	42.3	31,599	29.1
History	143	21.6	277	19.3	237	16.6	327	10.4	638	11.3	1,662	15.9	1,176	32.6	2,872	10.8
English & American Literature	159	30.8	385	28.4	385	26.8	548	17.8	1,515	23.9	4,669	38.9	2,112	50.8	9,802	33.9
Modern Foreign Language	101	29.8	287	27.0	284	29.2	396	22.9	1,032	31.2	5,536	46.8	1,427	57.6	5,818	34.4
PROFESSIONAL FIELDS	38	6.9	78	7.7	115	9.6	249	9.2	798	12.3	2,387	16.9	2,394	30.4	6,057	17.9
Business Administration			2	1.0	14	6.3	32	3.4	77	2.6	355	5.0	598	16.8	1,078	7.1
Law, Jurisprudence	9	3.9	14	4.7	7	6.3	14	4.7	6	2.2	15	5.4	7	6.2	72	4.1
Library Sciences			8	33.3	15	34.1	18	28.6	43	27.0	233	40.7	191	58.1	508	42.6
Social Work			1	50.0	3	50.0	26	41.3	180	36.7	506	88.3	550	54.0	1,266	43.5
EDUCATION	209	18.1	615	19.7	1,086	22.8	2,431	18.0	5,367	19.5	21,258	30.2	17,495	48.3	48,461	30.8
TOTAL ALL FIELDS	1,826	15.3	3,784	14.8	4,115	13.5	7,972	9.9	18,964	11.7	66,269	20.7	50,461	32.4	155,401	19.5

SOURCE: Summary Reports, Doctorate Recipients from United States Universities, 1975 through 1984, National Academy of Sciences

TABLE 2-2

DOCTORATES AWARDED BY U.S. UNIVERSITIES BY SEX, CY 1920 - FY 1984

YEAR	MEN	WOMEN		TOTAL	YEAR	MEN	WOMEN		TOTAL
	No.	No.	%*			No.	No.	%*	
CY 1920	472	88	15.7	560	1955	8,023	881	9.9	8,904
1921	554	107	16.2	661	1956	7,695	806	9.5	8,501
1922	668	112	14.4	780	1957	(5,486)**	(701)**	11.3	(6,187)**
1923	905	157	14.8	1,062	FY1958	7,782	991	11.3	8,773
1924	963	170	15.0	1,133	1959	8,236	976	10.6	9,212
1925	1,004	202	16.8	1,206	1960	8,690	1,042	10.7	9,732
1926	1,242	200	13.9	1,442	1961	9,284	1,128	10.8	10,412
1927	1,306	233	15.1	1,539	1962	10,269	1,236	10.7	11,505
1928	1,392	236	14.5	1,628	1963	11,333	1,391	10.9	12,724
1929	1,592	321	16.8	1,913	1964	12,763	1,561	10.9	14,324
1930	1,758	313	15.1	2,071	1965	14,581	1,759	10.8	16,340
1931	1,979	361	15.4	2,340	1966	15,863	2,090	11.6	17,953
1932	2,017	384	16.0	2,401	1967	17,944	2,440	12.0	20,384
1933	2,113	347	14.1	2,460	1968	19,985	2,931	12.8	22,916
1934	2,346	350	13.0	2,696	1969	22,341	3,387	13.2	25,728
1935	2,152	369	14.6	2,521	1970	25,509	3,970	13.5	29,479
1936	2,299	413	15.2	2,712	1971	27,247	4,594	14.4	31,841
1937	2,346	403	14.7	2,749	1972	27,719	5,282	16.0	33,001
1938	2,337	419	15.2	2,756	1973	27,645	6,082	18.0	33,727
1939	2,524	424	14.4	2,948	1974	26,585	6,415	19.4	33,000
1940	2,848	428	13.1	3,276	1975	25,720	7,193	21.9	32,913
1941	3,078	403	11.6	3,481	1976	25,247	7,676	23.3	32,923
1942	2,981	421	12.4	3,402	1977	23,827	7,845	24.8	31,672
1943	2,191	394	15.2	2,585	1978	22,537	8,313	26.9	30,850
1944	1,621	333	17.0	1,954	1979	22,279	8,921	28.6	31,200
1945	1,288	333	20.5	1,621	1980	21,595	9,387	30.3	30,982
1946	1,608	381	19.2	1,989	1981	21,447	9,872	31.5	31,319
1947	2,546	412	13.9	2,958	1982	20,991	10,057	32.4	31,040
1948	3,432	466	12.0	3,898	1983	20,705	10,425	33.4	31,190
1949	4,875	546	10.1	5,421	1984	20,593	10,660	34.1	31,253
1950	5,898	621	9.5	6,519	**TOTAL**	**632,038**	**153,341**	**19.5**	**785,379**
1951	6,649	682	9.3	7,331					
1952	6,984	732	9.5	7,716					
1953	7,589	789	9.4	8,378					
1954	7,912	794	9.1	8,706					

* Percent of total doctorate recipients.

**First half of calendar year.

SOURCE: Historical Statistics of the United States, Bureau of the Census, 1960 and Earned Degrees, 1969-70, 1979-80, NCES

TABLE 2-3

PROPORTION OF COLLEGE AND UNIVERSITY DEGREES EARNED BY WOMEN, 1870-1980

YEAR	ALL DEGREES	BACHELOR'S	MASTER'S	PH.D'S
1870		14.7		
1880		19.3		5.6
1890		17.3		1.3
1900	16.9	19.7	19.1	6.0
1910	22.7	22.7	26.4	9.9
1920	33.7	34.2	30.2	15.1
1930	39.5	39.9	40.4	15.4
1940	40.5	41.6	38.3	13.0
1950	24.4	23.9	29.2	9.7
1960	34.2	35.3	35.1	10.5
1970	40.4	41.5	39.7	13.3
1980	48.8	49.2	49.5	29.7

SOURCE: Doctorate Recipients from United States Universities, 1965-1984, National Research Council

TABLE 2-4

SCIENCE AND ENGINEERING DOCTORATE DEGREES, 1965-1984

Year	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
TOTAL DEGREES AWARDED						
1965	10,477	2,865	2,073	685	2,539	2,315
1966	11,456	3,058	2,299	769	2,712	2,618
1967	12,982	3,502	2,603	830	2,967	3,080
1968	14,411	3,667	2,847	970	3,501	3,426
1969	15,949	3,910	3,249	1,064	3,796	3,930
1970	17,731	4,400	3,432	1,222	4,163	4,514
1971	18,880	4,494	3,495	1,236	4,533	5,122
1972	18,940	4,226	3,475	1,281	4,505	5,453
1973	18,948	4,016	3,338	1,222	4,574	5,798
1974	18,316	3,696	3,144	1,196	4,407	5,873
1975	18,352	3,611	2,959	1,149	4,540	6,093
1976	17,872	3,442	2,791	1,003	4,480	6,156
1977	17,373	3,410	2,641	959	4,266	6,097
1978	17,956	3,234	2,423	959	4,887	6,453
1979	18,247	3,321	2,494	977	5,076	6,379
1980	18,171	3,151	2,479	963	5,325	6,253
1981	18,662	3,208	2,528	960	5,461	6,505
1982	18,747	3,348	2,644	940	5,565	6,250
1983	18,799	3,438	2,780	986	5,540	6,055
1984	19,008	3,459	2,915	994	5,745	5,895
DEGREES AWARDED TO WOMEN						
1965	744	127	7	50	263	297
1966	911	132	8	48	326	397
1967	1,086	161	9	48	401	467
1968	1,295	185	12	47	483	568
1969	1,472	205	10	56	537	664
1970	1,626	243	15	77	538	753
1971	1,929	244	16	96	656	917
1972	2,101	269	21	96	680	1,035
1973	2,446	257	45	119	795	1,230
1974	2,590	260	34	115	784	1,397
1975	2,838	284	50	110	863	1,531
1976	2,986	296	53	113	870	1,654
1977	3,103	303	74	128	845	1,753
1978	3,526	309	53	131	1,082	1,951
1979	3,854	351	63	145	1,190	2,105
1980	4,099	386	90	116	1,342	2,165
1981	4,359	364	99	138	1,443	2,315
1982	4,531	458	124	116	1,542	2,291
1983	4,838	468	124	149	1,717	2,330
1984	5,003	505	152	151	1,788	2,407

[1] Includes Environmental Science
[2] Includes Computer Science
[3] Includes Psychology

SOURCE: Summary Report 1984 Doctorate Recipients from United States Universities, National Research Council

TABLE 2-5

DOCTORATE RECIPIENTS, 1984

FIELD	TOTAL	WOMEN	FOREIGN-TEMP. VISA	U. S. & PERMANENT VISA			
				BLACK	ASIAN	HISPANIC	INDIAN
PHYSICAL SCIENCES	4,453	656	991	44	213	63	7
Mathematics	699	115	232	4	30	11	3
Computer Sciences	295	36	89	3	20	3	0
Physics/Astronomy	1,080	79	266	11	47	14	1
Chemistry	1,765	320	298	23	97	33	3
Earth/Atmos./Marine	614	106	106	3	19	2	0
ENGINEERING	2,915	152	1,268	15	250	34	3
LIFE SCIENCES	5,745	1,788	818	97	220	65	12
Biological	3,872	1,213	360	50	158	44	10
Health	718	413	75	26	37	11	1
Agricultural	1,155	162	383	21	25	10	1
SOCIAL SCIENCES	2,672	793	547	101	77	53	4
PSYCHOLOGY	3,223	1,614	87	121	43	83	6
HUMANITIES	3,528	1,586	251	101	56	113	5
PROFESSIONAL FIELDS	1,917	604	317	61	66	37	4
EDUCATION	6,780	3,457	537	529	92	157	32
TOTAL ALL FIELDS	31,253	10,660	4,817	1,049	1,017	605	73

NOTE: Total includes "other and unknown."

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1962, 1966, 1970, 1974, 1980, 1984, National Research Council

TABLE 2-6

PERCENT OF S/E DOCTORAL RECIPIENTS WHO WERE FOREIGN NATIONALS ON TEMPORARY VISAS, SELECTED YEARS

FIELD	1962	1966	1970	1974	1980	1984
	%	%	%	%	%	%
Physics/Astronomy	13.7	12.2	11.3	17.2	19.2	24.6
Chemistry	9.7	11.1	7.9	10.2	15.4	16.9
Earth/Environ. Science	9.2	12.9	13.9	16.1	12.7	17.3
Mathematics	16.8	12.6	10.9	18.5	18.7	33.2
Economics	17.2	20.1	17.2	22.0	25.0	31.1
Political Science	19.1	13.0	9.3	10.8	11.9	15.5
Engineering	17.9	16.7	13.7	22.4	34.3	43.5
Biological Science	14.4	14.3	10.5	10.5	7.8	9.3
Medical (Health) Science	14.6	18.6	16.6	9.4	11.3	10.5
Agricultural Science	23.8	30.4	25.3	33.2	32.6	33.2
TOTAL S/E	15.2	15.3	12.5	16.7	18.8	19.5

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1984 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1985

TABLE 2-7

NUMBER OF Ph.D. RECIPIENTS IN ALL SCIENCE/ENGINEERING FIELDS BY TYPE OF CITIZENSHIP, 1960-1984

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	6,316	5,301	966	223	743	49
1961	6,757	5,632	1,032	182	850	93
1962	7,493	6,231	1,174	138	1,036	88
1963	8,279	6,884	1,258	234	1,024	137
1964	9,297	7,625	1,488	294	1,194	184
1965	10,542	8,590	1,797	357	1,440	155
1966	11,537	9,263	1,978	369	1,609	296
1967	13,065	10,561	2,253	568	1,685	251
1968	14,526	11,808	2,489	678	1,811	229
1969	16,075	13,080	2,721	842	1,879	274
1970	17,840	14,494	3,165	1,136	2,029	181
1971	19,078	15,300	3,514	1,411	2,103	264
1972	19,127	15,005	3,812	1,632	2,180	310
1973	19,121	14,788	4,004	1,565	2,439	329
1974	18,460	13,560	4,050	1,388	2,662	850
1975	18,488	14,107	4,015	1,257	2,758	366
1976	18,089	13,922	3,801	1,068	2,713	366
1977	17,641	13,538	3,609	982	2,627	494
1978	17,034	13,009	3,472	970	2,502	553
1979	17,230	13,195	3,526	924	2,602	509
1980	18,171	13,901	3,743	969	2,774	527
1981	18,662	14,090	3,919	927	2,992	853
1982	18,747	13,854	4,082	886	3,196	811
1983	18,799	13,742	4,361	921	3,440	696
1984	19,008	13,686	4,562	855	3,707	760

SOURCE: Women and Minority Ph.D's in the 1970's - A Data Book, 1977, and Summary Report, Doctorate Recipients from U.S. Universities, Series, 1977-1984, National Research Council

TABLE 2-8

DOCTORAL RECIPIENTS WHO ARE U.S. CITIZENS OR HAVE PERMANENT VISAS, BY FIELD, DEGREE COHORT, AND RACIAL/ETHNIC GROUP, 1973-1984

FIELD AND PH.D. COHORT	Total	WHITE		BLACK		AM. INDIAN		HISPANIC		ASIAN		OTHER/UNKNOWN	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL FIELDS	**324,739**	**273,064**	**84.1**	**12,465**	**3.8**	**1,500**	**0.5**	**5,528**	**1.7**	**12,414**	**3.8**	**20,055**	**6.2**
1973-76	115,523	94,530	81.8	3,692	3.2	526	0.5	1,161	1.0	4,163	3.6	11,451	9.9
1977-80	106,977	90,091	84.2	4,487	4.2	655	0.6	2,021	1.9	4,132	3.9	5,591	5.2
1981-84	102,526	88,443	86.3	4,286	4.2	319	0.3	2,346	2.3	4,119	4.0	3,013	2.9
MATHEMATICS	**7,532**	**6,557**	**87.1**	**102**	**1.4**	**23**	**0.3**	**86**	**1.1**	**496**	**6.6**	**274**	**3.6**
1973-76	2,996	2,675	89.3	34	1.1	13	0.4	21	0.7	186	6.2	67	2.2
1977-80	2,614	2,225	85.1	46	1.8	5	0.2	30	1.1	174	6.7	134	5.1
1981-84	1,922	1,657	86.2	22	1.1	5	0.3	29	1.5	136	7.8	73	3.8
COMPUTER SCIENCES	**1,881**	**1,355**	**72.0**	**16**	**0.9**	**7**	**0.4**	**12**	**0.6**	**133**	**7.1**	**358**	**19.0**
1973-76	706	353	50.0	6	0.8	2	0.3	5	0.7	43	6.1	297	42.1
1977-80	433	370	92.7	1	0.3	3	0.8	3	0.8	22	5.5	34	8.5
1981-84	742	632	85.2	9	1.2	2	0.3	4	0.5	68	9.2	27	3.6
PHYSICS/ASTRONOMY	**11,211**	**8,882**	**79.2**	**95**	**0.9**	**33**	**0.3**	**110**	**1.0**	**708**	**6.3**	**1,013**	**9.0**
1973-76	4,378	3,516	80.3	28	0.6	13	0.3	27	0.6	280	6.4	514	11.7
1977-80	3,791	2,760	72.8	30	0.8	13	0.3	47	1.2	230	6.1	341	9.0
1981-84	3,042	2,606	85.7	37	1.2	7	0.2	36	1.2	198	6.5	158	5.2
CHEMISTRY	**16,841**	**13,961**	**82.4**	**250**	**1.5**	**47**	**0.3**	**199**	**1.2**	**1,276**	**7.5**	**1,108**	**6.5**
1973-76	6,081	4,880	80.3	86	1.4	12	0.2	41	0.7	476	7.8	586	9.6
1977-80	5,234	4,283	81.8	92	1.8	28	0.5	65	1.2	442	8.4	324	6.2
1981-84	5,526	4,798	86.8	72	1.3	7	0.1	93	1.7	358	6.5	198	3.6
EARTH/ ENV./ MARINE	**6,172**	**5,418**	**87.8**	**23**	**0.4**	**26**	**0.4**	**62**	**1.0**	**246**	**4.0**	**397**	**6.4**
1973-76	1,901	1,590	83.6	2	0.1	11	0.6	9	0.5	74	3.9	215	11.3
1977-80	2,218	1,958	88.3	10	0.5	13	0.6	27	1.2	89	4.0	121	5.4
1981-84	2,053	1,870	91.1	11	0.5	2	0.1	26	1.3	83	4.0	61	3.0
ENGINEERING	**21,403**	**15,794**	**73.8**	**224**	**1.1**	**64**	**0.3**	**271**	**1.3**	**3,345**	**15.6**	**1,705**	**7.8**
1973-76	8,934	6,452	72.2	75	0.8	24	0.3	51	0.6	1,217	13.6	1,115	12.5
1977-80	6,546	4,867	74.4	66	1.0	29	0.4	106	1.6	1,103	16.8	375	5.7
1981-84	5,923	4,475	75.6	83	1.4	11	0.2	114	1.9	1,025	17.3	215	3.6
BIOLOGICAL SCIENCES	**36,017**	**31,055**	**86.2**	**526**	**1.5**	**144**	**0.4**	**387**	**1.1**	**1,705**	**4.7**	**2,200**	**6.1**
1973-76	11,508	9,472	82.3	185	1.6	47	0.4	101	0.9	536	4.7	1,167	10.1
1977-80	11,660	10,117	86.8	156	1.3	72	0.6	116	1.0	569	4.9	630	5.4
1981-84	12,849	11,466	89.2	185	1.4	25	0.2	170	1.3	600	4.7	403	3.1
AGRICULTURAL SCIENCES	**8,398**	**7,283**	**86.7**	**145**	**1.7**	**34**	**0.4**	**96**	**1.1**	**412**	**4.9**	**428**	**5.1**
1973-76	2,753	2,297	90.8	31	1.2	13	0.5	18	0.7	171	6.8	223	8.1
1977-80	2,626	2,284	87.0	54	2.1	14	0.5	32	1.2	124	4.7	118	4.5
1981-84	3,019	2,702	89.5	60	2.0	7	0.2	46	1.5	117	3.9	87	2.9
MEDICAL/HEALTH SCIENCES	**7,351**	**6,123**	**83.3**	**222**	**3.0**	**26**	**0.4**	**72**	**1.0**	**474**	**6.5**	**425**	**5.8**
1973-76	2,028	1,605	88.3	47	2.6	6	0.3	12	0.6	147	8.1	211	10.4
1977-80	2,567	2,151	83.8	97	3.8	10	0.4	23	0.9	162	6.3	124	4.8
1981-84	2,747	2,367	86.2	78	2.8	10	0.4	37	1.4	165	6.0	90	3.3
SOCIAL SCIENCES	**32,197**	**27,064**	**84.1**	**1,196**	**3.7**	**130**	**0.4**	**554**	**1.7**	**980**	**3.0**	**2,274**	**7.1**
1973-76	12,056	10,007	83.0	315	2.6	49	0.4	107	0.8	289	2.4	1,289	10.7
1977-80	11,119	9,374	84.3	454	4.1	65	0.6	218	2.0	356	3.2	652	5.9
1981-84	9,022	7,683	85.2	427	4.7	15	0.2	229	2.5	335	3.7	333	3.7
PSYCHOLOGY	**33,480**	**29,611**	**88.4**	**1,121**	**3.4**	**151**	**0.5**	**600**	**1.8**	**390**	**1.2**	**1,613**	**4.8**
1973-76	10,094	8,755	94.9	240	2.6	47	0.5	93	1.0	88	1.0	871	8.6
1977-80	11,284	9,967	88.3	420	3.7	63	0.6	192	1.7	143	1.3	499	4.4
1981-84	12,102	10,889	89.9	461	3.8	41	0.3	315	2.6	159	1.3	243	2.0
LANGUAGES & LITERATURE	**19,588**	**16,934**	**86.5**	**417**	**2.1**	**74**	**0.4**	**831**	**4.2**	**212**	**1.1**	**1,243**	**6.4**
1973-76	8,552	7,297	85.3	141	1.6	41	0.5	203	2.4	68	0.8	802	9.4
1977-80	6,295	5,555	88.2	151	2.4	25	0.4	307	4.9	68	1.1	312	5.0
1981-84	4,741	4,082	86.1	125	2.6	8	0.2	321	6.8	76	1.6	129	2.7
OTHER HUMANITIES	**27,631**	**23,979**	**86.8**	**731**	**2.7**	**130**	**0.5**	**383**	**1.4**	**486**	**1.8**	**1,919**	**7.0**
1973-76	10,453	8,816	84.3	198	1.9	52	0.5	77	0.7	181	1.7	1,129	10.8
1977-80	9,152	7,961	87.0	280	3.1	57	0.6	165	1.8	167	1.8	519	5.7
1981-84	8,026	7,202	89.7	253	3.2	21	0.3	141	1.8	138	1.7	271	3.4
PROFESSIONAL FIELDS	**15,026**	**12,800**	**85.2**	**585**	**3.9**	**47**	**0.3**	**202**	**1.4**	**486**	**3.2**	**905**	**6.0**
1973-76	4,987	4,173	92.9	142	3.2	18	0.4	39	0.7	119	2.7	496	9.9
1977-80	4,732	4,056	85.7	202	4.3	19	0.4	66	1.4	149	3.1	240	5.1
1981-84	5,307	4,571	86.1	241	4.5	10	0.2	98	1.9	218	4.1	169	3.2
EDUCATION	**80,055**	**65,860**	**82.3**	**6,832**	**8.5**	**564**	**0.7**	**1,656**	**2.1**	**1,029**	**1.3**	**4,114**	**5.1**
1973-76	27,596	22,211	88.3	2,155	8.6	178	0.7	351	1.3	255	1.0	2,446	8.9
1977-80	26,985	22,217	82.3	2,457	9.1	239	0.9	618	2.3	340	1.3	1,114	4.1
1981-84	25,474	21,432	84.1	2,220	8.7	147	0.6	687	2.7	434	1.7	554	2.2

SOURCE: Summary Report, Doctorate Recipients from U.S. Universities, 1974 to 1984, National Research Council

TABLE 2-9

NUMBER OF DOCTORATE RECIPIENTS BY SOURCES OF SUPPORT IN GRADUATE SCHOOL, FISCAL YEARS 1974, 1978, 1980, 1982 AND 1984

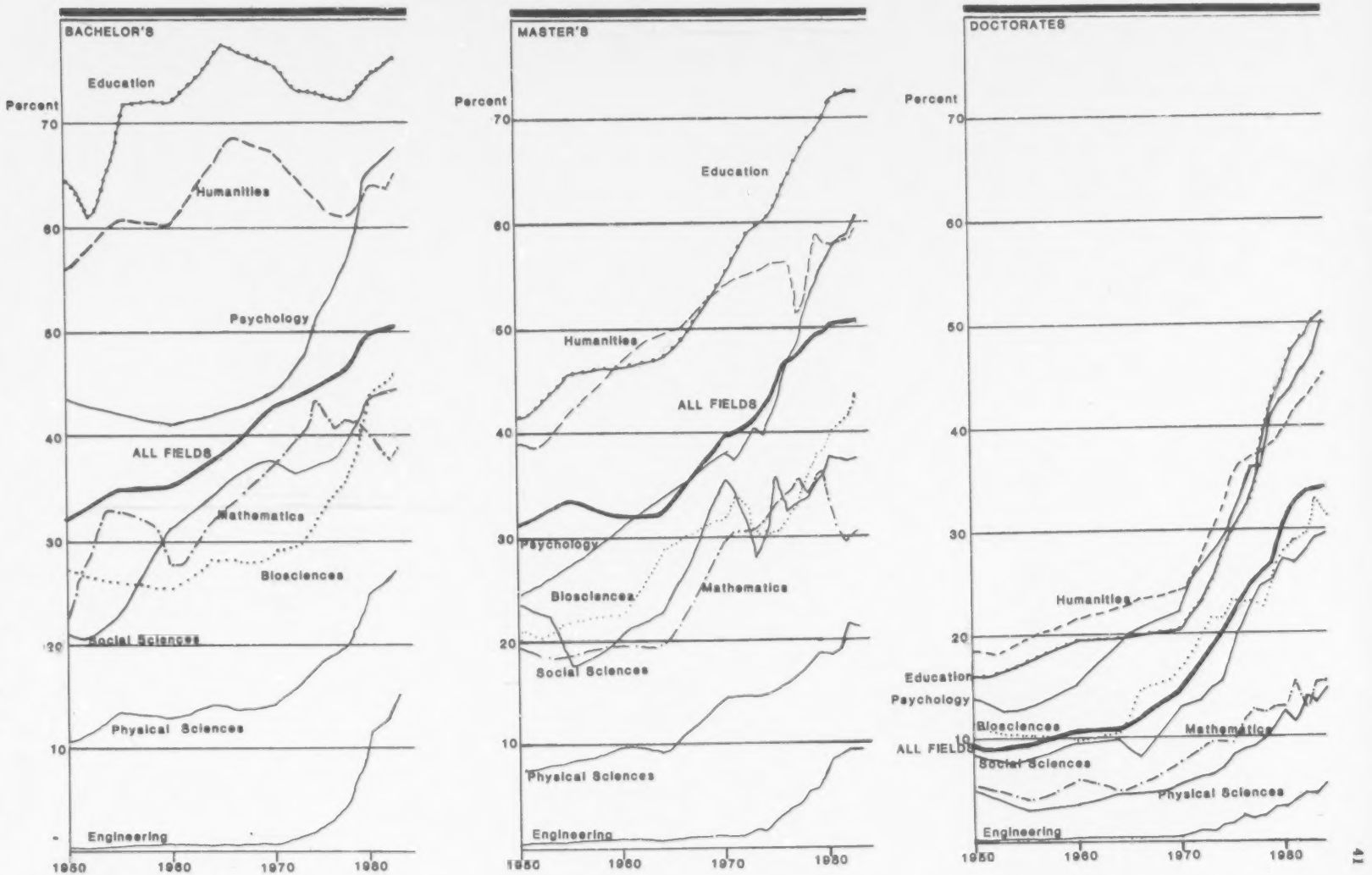
SOURCE OF SUPPORT	FISCAL YEAR 1974				FISCAL YEAR 1978				FISCAL YEAR 1980				FISCAL YEAR 1982				FISCAL YEAR 1984			
	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%
FEDERAL SUPPORT																				
NSF Fellowship	1,305	5.3	206	3.5	586	2.7	139	1.8	554	2.7	153	1.7	496	2.5	135	1.4	422	2.2	168	1.7
NSF Traineeship	1,241	5.0	191	3.2	354	1.7	68	0.9	204	1.0	53	0.6	139	0.7	41	0.4				
NIH Fellowship	663	2.7	270	4.6	369	1.7	193	2.5	341	1.7	207	2.3	313	1.6	199	2.1				
NIH Traineeship	1,233	5.0	441	7.5	1,068	5.0	473	6.1	980	4.8	510	5.7	906	4.6	546	5.7	1,045	5.4	688	6.8
NDEA Fellowship	2,789	11.3	707	12.0	738	3.5	315	4.0	363	1.8	214	2.4	181	0.9	110	1.2				
National Direct Student Loan					1,789	8.4	650	8.3	1,960	9.6	991	11.2	2,390	12.2	1,436	15.1	1,443	7.5	1,035	10.2
Other HEW/HHS[1]					575	2.7	423	5.4	589	2.9	556	6.3	460	2.3	442	4.7	223	1.2	277	2.7
Other Ed Dept[2]																	163	0.8	142	1.4
Grad/Prof. Opp Program													33	0.2	43	0.5	51	0.3	45	0.4
NASA Traineeship	324	1.5	22	0.4	57	0.3	8	0.1												
GI Bill	3,263	13.2	22	0.4	2,657	12.5	50	0.6	2,011	9.9	48	0.5	1,421	7.2	53	0.6	1,120	5.8	89	0.9
Other Federal Support[3]	2,631	10.7	702	11.9	1,159	5.4	341	4.4	1,147	5.6	413	4.6	1,101	5.6	443	4.6	891	4.6	489	4.8
NATIONAL FELLOWSHIPS[4]									507	2.5	338	3.8	563	2.9	383	4.0	777	4.0	616	6.1
INSTITUTIONAL FUNDS																				
University Fellowship	4,680	18.9	1,360	23.1	3,844	18.0	1,422	18.2	3,717	18.2	1,675	18.8	3,651	18.6	1,853	19.5	3,876	20.1	2,086	20.6
Teaching Assistantship	12,326	49.8	2,786	47.3	9,833	46.1	3,360	43.1	9,568	46.9	3,818	43.0	9,317	47.4	4,063	42.8	9,432	48.8	4487	44.3
Research Assistantship	9,079	36.7	1,421	24.1	8,249	38.7	1,957	25.1	8,189	40.2	2,303	25.9	8,329	42.4	2,683	28.3	8,865	45.9	3,115	30.7
Ed. Funds, Industry	979	4.0	108	1.8	632	3.0	142	1.8	676	3.3	204	2.3	735	3.7	219	2.3	907	4.7	414	4.1
Other Univ. Related	2,163	8.7	701	11.9	1,453	6.8	678	8.7	1,462	7.2	845	9.5	1,430	7.3	892	9.4	1,124	5.8	938	9.3
College Work/Study																	586	3.0	421	4.2
PERSONAL FUNDS																				
Own Earnings	9,678	39.1	2,529	42.9	10,310	48.4	4,489	57.6	10,221	50.1	5,288	59.5	9,698	49.3	5,724	60.3	10,953	56.7	6,861	67.7
Spouse's Earnings	4,948	20.0	1,232	20.9	6,411	30.1	2,590	33.2	6,017	29.5	2,967	33.4	5,459	27.8	3,235	34.1	5,651	29.2	3,558	35.1
Family Contributions	1,632	6.6	495	8.4	2,876	13.5	1,215	15.6	3,158	15.5	1,530	17.2	3,432	17.5	1,698	17.9	4,417	22.9	2,332	23.0
Borrowings[5]	3,308	13.4	703	11.9	1,995	9.4	799	10.2	2,054	10.1	926	10.4	2,247	11.4	1,297	13.7	4,199	21.7	2,732	26.9
Other	1,282	5.2	331	5.6	1,550	7.3	537	6.9	1,541	7.6	579	6.5	1,545	7.9	584	6.1	1,440	7.5	563	5.6
UNDUPLICATED TOTAL	24,761		5,894		21,323		7,799		20,385		8,886		19,664		9,496		19,327		10,131	

[1] Includes ADAMHA Traineeships and Fellowships.
[2] Includes Title IV Language Area and Area Studies Fellowships.
[3] Includes AEC/ERDA Fellowships and NASA Traineeships which were formerly shown separately.
[4] Includes Woodrow Wilson Fellowships which were formerly shown separately.
[5] Includes Guaranteed Student Loans and Other Loans.

SOURCE: Series of Earned Degrees, USOE and Summary Report, Doctorate Recipients from United States Universities, 1971-84, National Research Council

TABLE 2-10

PERCENT OF DEGREES GRANTED TO WOMEN 1950 - 1983



SOURCE: Earned Degrees Conferred Series, 1971-72 through 1980-81 and Unpublished Data, National Center for Education Statistics, 1981-82 and 1982-83

TABLE 2-11

PROPORTION OF BACHELOR'S AND MASTER'S DEGREES AWARDED TO WOMEN, BY FIELD, 1971-72 - 1982-83

	1971-72	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
BACHELOR'S DEGREES											
Agricultural & Nat. Resources	5.5%	9.7%	14.1%	18.3%	22.2%	24.6%	27.1%	29.6%	30.8%	31.3%	32.6%
Architecture & Environ. Design	12.0	14.8	17.4	19.2	21.4	23.7	25.8	27.8	28.1	29.8	34.8
Area Studies	52.5	54.3	55.1	55.5	56.0	59.7	58.2	60.5	60.1	64.0	63.0
Biological/Life Sciences	29.6	31.5	33.3	34.8	36.4	38.7	40.6	42.4	44.1	45.4	46.1
Business & Management	9.7	13.1	16.4	19.8	25.6	27.3	30.7	33.8	36.7	39.3	42.0
Communications	35.5	38.4	40.5	41.5	44.3	46.9	50.0	52.3	54.7	56.4	58.6
Communications Technologies											47.4
Computer & Inform. Science	13.6	16.4	19.0	19.8	23.9	25.8	28.1	30.3	32.5	34.8	36.3
Education	74.1	73.5	73.3	72.8	72.2	72.5	73.2	73.9	75.0	75.9	75.8
Engineering	1.1	1.6	2.1	3.4	4.9	7.41	9.1	10.1	11.1	12.3	13.3
Engineering Technologies	0.8	1.4	2.6	2.1	2.3	28.0	3.5	4.7	5.8	6.7	8.0
Fine & Applied Arts/Vis., Perf. Arts	59.9	60.2	61.9	60.9	61.4	62.0	62.5	63.2	63.4	63.3	62.8
Foreign Languages	75.1	76.4	77.0	76.4	76.2	76.1	76.0	75.7	75.6	75.7	74.3
Health Professions/Sciences	75.7	77.4	77.8	78.8	79.2	80.6	82.0	82.3	83.5	84.1	84.2
Home Economics	96.5	96.4	96.0	95.9	95.9	95.6	95.1	95.4	95.0	94.3	94.3
Law	6.6	10.5	14.2	18.8	27.5	28.6	40.4	45.5	50.0	50.8	58.4
Letters	60.1	58.0	57.3	56.9	56.7	57.2	58.0	59.4	59.8	60.7	65.8
Liberal/General Studies											54.1
Library Science	93.3	92.6	92.5	93.1	90.9	88.5	94.6	95.0	94.1	86.0	89.2
Mathematics	39.1	41.0	42.0	40.7	41.6	41.3	41.7	42.3	42.8	43.2	43.8
Military Science	0.0	0.3	0.0	0.2	0.3	2.3	3.5	4.0	3.9	7.4	10.9
Parks, Recreation											63.0
Philosophy/Religion											33.0
Physical Sciences	15.1	16.6	18.4	19.2	20.1	21.5	22.6	23.9	24.6	25.7	27.3
Protective Services											39.5
Psychology	46.4	50.5	52.7	54.4	56.7	58.9	61.3	63.3	65.0	66.8	67.5
Public Affairs & Services	47.9	43.5	45.6	43.7	45.1	49.6	53.5	55.3	58.0	59.5	69.9
Social Sciences	36.3	36.6	37.4	37.9	39.4	40.6	42.0	43.7	44.2	44.7	44.6
Theology	27.8	28.1	27.4	27.3	25.7	24.1	25.6	25.4	25.4	25.6	27.1
Interdisciplinary Studies	31.1	37.1	42.2	45.0	47.0	47.3	49.9	50.2	51.0	52.1	49.6
ALL DISCIPLINES	**43.7**	**44.4**	**45.4**	**45.6**	**46.2**	**47.2**	**48.3**	**49.2**	**49.8**	**50.3**	**50.6**
MASTER'S DEGREES											
Agricultural & Nat. Resources	7.1	9.8	11.8	14.3	14.6	18.7	20.2	22.4	23.5	25.2	26.5
Architecture & Environ. Design	14.6	18.4	20.3	20.8	22.5	26.0	28.5	28.5	29.1	32.6	33.8
Area Ethnic Studies	40.7	38.9	43.2	45.3	46.9	47.8	49.0	47.8	51.6	49.3	50.2
Biological Life Sciences	33.1	30.6	30.0	31.8	33.8	35.5	37.7	37.1	38.9	41.7	43.6
Business & Management	3.9	6.6	8.4	11.6	14.3	16.9	19.1	22.3	25.0	27.8	28.9
Communications	34.4	36.8	42.1	41.8	44.4	49.3	48.5	50.5	53.4	52.6	54.0
Communications Technologies											51.0
Computer & Inform. Science	11.4	12.9	14.7	14.5	16.7	18.7	18.8	20.9	23.0	26.5	28.3
Education	57.3	59.9	62.2	64.3	65.8	67.7	68.6	70.2	71.5	72.3	72.3
Engineering	1.6	2.3	2.5	3.6	4.4	5.2	6.1	7.1	8.1	9.0	9.3
Engineering Technologies	0.4	4.3	1.8	4.3	8.1	6.9	6.7	5.9	12.1	13.3	9.8
Fine & Applied Arts/Vis.,Perf. Arts	46.3	45.9	46.8	48.9	51.2	52.1	53.9	53.3	53.0	55.8	54.1
Foreign Languages	65.1	66.1	66.9	66.7	69.5	70.8	69.6	70.4	67.0	69.7	65.7
Health Professions/Sciences	56.4	60.2	61.8	66.5	67.9	70.3	71.1	72.3	73.9	75.7	75.2
Home Economics	92.7	91.1	89.3	91.5	91.1	91.9	91.2	91.3	90.2	91.5	90.8
Law	5.8	7.1	8.0	12.0	13.2	14.6	15.5	15.7	17.8	20.2	23.3
Letters	57.7	56.6	58.8	58.3	59.5	61.8	61.3	60.6	61.1	62.0	65.1
Liberal/General Studies											61.5
Library Science	79.9	77.8	78.8	78.3	79.6	80.0	80.4	81.3	82.7	82.3	81.5
Mathematics	29.8	31.0	32.9	34.0	35.1	34.0	34.7	36.1	34.1	33.2	34.5
Military Science	0.0	0.0	0.0	0.0	2.3	2.2	0.0	0.0	0.0	2.0	0.9
Parks, Recreation											53.3
Philosophy/Religion											38.9
Physical Sciences	14.1	14.6	14.5	15.0	16.6	17.0	18.2	18.6	18.4	21.7	21.4
Protective Services											26.9
Psychology	38.4	39.8	42.9	46.7	48.1	52.0	54.1	56.8	58.0	58.8	61.4
Public Affairs & Services	47.0	45.3	44.6	45.3	45.5	47.9	50.8	52.2	55.4	57.3	62.4
Social Sciences	28.2	28.8	30.0	31.6	32.9	33.2	35.3	36.2	37.6	37.8	37.8
Theology	23.4	27.2	30.9	32.1	31.4	30.5	32.0	31.0	33.6	34.8	27.1
Interdisciplinary Studies	39.2	45.8	47.7	46.5	37.1	37.5	38.8	42.2	39.8	42.9	42.8
All Disciplines	**40.6**	**43.4**	**44.8**	**46.4**	**47.1**	**48.3**	**49.1**	**49.5**	**50.3**	**50.8**	**50.1**

SOURCE: Earned Degrees Conferred, Series 1948 - 1979, National Center for Education Statistics, and Summary Report 1970 - 1979 Doctorates Awarded by U.S. Universities and Doctorate Records File, National Research Council

TABLE 2-12

PERCENT OF DEGREES AWARDED TO WOMEN BY TIME PERIOD, DEGREE LEVEL AND BROAD FIELD

FIELD	BACHELOR'S			MASTER'S			DOCTORATE			
	1948-1959	1960-1969	1970-1979	1948-1959	1960-1969	1970-1979	1940-1949	1950-1959	1960-1969	1970-1979
Total All Fields	32.1	40.0	45.2	31.9	34.6	44.5	13.5	9.9	11.7	20.7
Physical Sciences	12.8	13.8	17.7	8.2	10.6	15.0	5.0	3.7	4.6	8.2
Chemistry	18.6	19.0	21.6	13.0	18.9	22.4	4.2	4.4	6.4	10.4
Physics	4.5	5.3	8.7	3.9	4.7	8.0	4.2	2.0	2.2	3.9
Earth Sciences	4.1	9.1	18.0	3.5	6.4	14.2	5.7	1.9	2.0	5.8
Mathematics	29.1	34.2	40.0	19.8	23.8	31.6	10.7	5.0	5.7	10.1
Computer Sciences	-	12.5	20.9	-	7.5	14.5	-	-	-	11.5
Engineering	0.3	0.5	3.2	0.3	0.6	3.0	0.5	0.3	0.4	1.4
Life Sciences	-	-	-	-	-	-	12.7	9.1	11.6	18.1
Biological Sciences	25.8	28.4	33.7	21.0	27.7	32.9	15.7	11.8	15.1	21.6
Agricultural Sciences	1.8	3.4	15.9	1.9	4.5	12.8	0.6	1.1	1.4	5.0
Medical Sciences	-	-	-	-	-	-	6.9	8.1	9.5	21.2
Social Sciences*	27.2	32.6	36.4	18.3	20.5	31.2	14.5	11.0	14.3	31.6
Psychology	42.9	41.8	52.0	30.4	33.5	44.9	24.1	14.8	20.7	32.2
Business & Management	12.2	13.8	18.0	-	-	10.7	6.3	3.4	2.6	5.0
Arts & Humanities	60.2	66.4	57.3	43.1	50.3	51.6	22.9	15.5	19.5	31.4
Education	75.4	75.8	73.5	44.7	48.3	62.1	22.8	18.0	19.5	30.2

* Anthropology, Sociology, Economics and Political Science

SOURCE: Earned Degrees Conferred Series, 1970-71 - 1981-82, National Center for Education Statistics

TABLE 2-13

TOTAL AND PROPORTION OF BACHELOR'S, MASTER'S AND DOCTORAL DEGREES AWARDED TO WOMEN 1970-71 THROUGH 1981-82 BY BROAD DISCIPLINE DIVISION

	DEGREES AWARDED 1970-71 - 1981-82								
	Bachelor's			Master's			Ph. D.'s		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Agriculture & Nat. Resources	227,725	46,767	20.5	41,242	6,680	16.2	11,916	794	6.7
Architecture & Environ. Design	100,431	21,408	21.3	52,466	7,953	15.2	858	146	17.0
Area Studies	33,778	19,115	56.6	11,196	4,941	44.1	1,815	536	29.5
Biological Sciences	560,296	204,406	36.5	77,171	26,589	34.5	42,520	9,627	22.6
Business & Management	1,881,027	462,276	24.6	520,946	82,511	15.8	10,691	859	8.0
Communications	264,331	123,420	46.7	33,813	15,073	44.6	2,068	543	26.3
Computer & Inform. Sciences	94,548	25,519	27.0	34,547	6,275	18.2	2,537	213	8.4
Education	1,818,529	1,338,744	73.6	1,296,235	843,278	65.1	90,046	31,666	35.2
Engineering	690,904	39,319	5.7	196,196	8,717	4.4	35,278	838	2.4
Fine & Applied Arts	469,891	289,624	61.6	98,935	49,624	50.2	7,712	2,481	32.2
Foreign Languages	183,361	139,173	75.9	39,779	26,693	67.1	8,972	4,240	47.3
Health Professions	606,066	486,832	80.3	146,797	99,436	67.7	7,790	2,620	33.6
Home Economics	195,493	187,115	95.7	25,835	23,585	91.3	2,130	1,501	70.5
Law	7,178	2,058	28.7	17,352	2,247	12.9	488	36	7.4
Letters	650,051	381,879	58.7	127,756	75,484	59.1	26,898	9,450	35.1
Library Science	9,350	8,647	92.5	81,729	65,214	79.8	832	391	47.0
Mathematics	201,288	79,080	39.3	46,760	15,141	32.4	10,748	1,251	11.6
Military Science	5,496	71	1.3	221	2	0.9	-	-	-
Physical Sciences	267,808	48,254	18.0	67,749	11,217	16.6	42,309	3,841	9.1
Psychology	543,966	301,964	55.5	321,997	160,109	49.7	29,656	10,503	35.4
Public Affairs & Services	348,634	176,002	50.5	194,027	95,727	49.3	3,794	1,197	31.5
Social Sciences	1,538,197	602,406	39.2	180,579	57,434	31.8	44,599	9,506	21.3
Theology	62,428	16,297	26.1	40,379	12,234	30.3	11,492	580	5.0
Interdisciplinary Studies	347,850	156,595	45.0	45,275	18,787	41.5	3,560	1,055	29.6
ALL DISCIPLINES	**11,109,132**	**5,165,309**	**46.5**	**3,454,804**	**1,596,550**	**46.2**	**398,713**	**93,784**	**23.5**

SOURCE: National Center for Education Statistics, Unpublished

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1982-83

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
TOTAL, ALL DISCIPLINE DIVISIONS	969,504	479,136	490,368	289,921	144,697	145,224	32,775	21,902	10,873
Agribusiness & Ag Production	5,757	4,475	1,282	833	643	190	196	174	22
Agricultural Sciences	10,270	6,215	4,055	2,265	1,597	668	745	641	104
Animal Sciences	4,111	2,235	1,876	584	399	185	195	168	27
Food Sciences	637	297	340	276	141	135	103	76	27
Plant Sciences	3,197	2,026	1,171	922	681	241	347	309	38
Soil Sciences	264	188	76	144	119	26	67	59	8
Agricultural Sciences, Other	2,061	1,469	592	339	258	81	33	29	4
Renewable Natural Resources	4,882	3,395	1,487	1,156	889	267	208	189	19
Conservation	1,719	1,035	684	318	242	76	37	33	4
Fisheries	189	153	36	88	75	13	26	24	2
Forestry Sciences	1,948	1,538	410	572	438	134	110	101	9
Wildlife Management	794	526	268	135	106	29	25	21	4
Natural Resources, Other	232	143	89	43	28	15	10	10	0
Architecture & Environmental Design	9,823	6,403	3,420	3,357	2,224	1,133	97	74	23
Architecture	4,587	3,543	1,044	1,630	1,214	416	26	19	7
Arch. & Environmental Design, other	5,236	2,860	2,376	1,727	1,010	717	71	55	16
Area and Ethnic Studies	2,971	1,100	1,871	826	411	415	153	90	63
Business & Management	220,078	129,472	90,606	65,245	46,407	18,838	809	673	136
Business & Management, General	42,174	24,806	17,368	11,543	8,076	3,467	164	129	35
Accounting	45,732	24,961	20,771	3,046	1,997	1,049	66	53	13
Banking and Finance	15,556	10,470	5,086	4,062	2,935	1,127	28	26	2
Business Administration & Mgmt.	67,984	40,722	27,262	36,596	26,407	10,189	356	297	59
Business Economics	3,209	2,172	1,037	333	240	93	44	41	3
Labor/Industrial Relations	1,296	713	583	898	515	383	11	10	1
Management Information Systems	1,784	1,032	752	359	289	70	0	0	0
Other Management Sciences	7,418	4,718	2,700	3,287	1,056	986	64	55	9
Marketing Management/Research	24,688	13,506	11,182	1,747	1,031	716	25	19	6
Personnel Management	2,020	1,037	983	247	150	97	3	1	2
Business & Management, Other	8,217	5,335	2,882	2,838	2,290	548	28	26	2
Business & Office	3,465	784	2,681	31	18	13	0	0	0
Office Supv. & Management	1,283	125	1,158	9	9	0	0	0	0
Business & Office, Other	2,182	659	1,523	22	9	13	0	0	0
Marketing & Distribution	3,303	1,420	1,883	43	32	11	0	0	0
Communications	36,954	15,318	21,636	3,502	1,611	1,891	205	120	85
Advertising	2,081	768	1,313	165	74	91	0	0	0
Journalism	10,074	3,849	6,225	1,102	508	594	40	27	13
Radio/TV	6,115	3,379	2,736	334	190	144	21	13	8
Communications, General and Other	18,684	7,322	11,362	1,901	839	1,062	144	80	64
Communications, Technical	1,648	867	781	102	50	52	9	6	3
Computer and Information Sciences	24,510	15,606	8,904	5,321	3,813	1,508	262	228	34
Comp. & Info Science, General	19,549	12,596	6,953	4,525	3,303	1,222	250	218	32
Computer Programming	221	152	69	16	12	4	0	0	0
Data Processing	860	509	351	68	54	14	0	0	0
Info. Systems & Design	2,582	1,501	1,081	492	287	205	5	4	1
System Analysis	253	171	86	53	38	15	0	0	0
Comp. & Inf. Sci., Other	1,041	677	364	167	119	48	7	6	1
Consumer Pers. Services	47	42	5	0	0	0	0	0	0
Education	97,991	23,670	74,321	84,853	23,232	61,621	7,551	3,764	3,787
Education, General	1,528	346	1,182	8,153	2,151	6,002	1,146	548	598
Bilingual/Bicultural Education	110	18	92	191	38	153	16	6	10
Special Education, General	7,358	537	6,821	7,958	1,031	6,927	213	74	139
Elementary Education	34,876	2,729	32,147	10,588	1,111	9,477	145	37	108
Junior High Education	424	64	360	315	48	267	4	2	2
Pre-elementary Education	4,681	118	4,563	1,590	52	1,538	48	10	38
Secondary Education	2,508	1,005	1,503	3,501	1,265	2,236	117	59	58
Agricultural Education	809	622	187	304	241	63	33	26	7
Art Education	1,695	343	1,352	640	165	475	47	18	29
Business Education	2,288	395	1,893	746	134	612	30	17	13
Health Education	1,711	453	1,258	815	178	637	79	28	51
Home Economics Education	1,551	66	1,485	304	2	302	18	1	17

TABLE 2-14 Continued

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1982-83 (continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
Education (continued)									
Industrial Arts Education	2,851	2,521	330	718	603	115	48	36	12
Mathematics Education	672	256	416	439	156	283	24	10	14
Music Education	4,378	1,855	2,523	1,017	484	533	65	47	18
Physical Education	14,919	7,356	7,563	3,617	1,885	1,732	226	128	98
Reading Education	185	14	171	4,295	346	3,949	123	36	87
Science Education	615	243	372	427	191	236	58	41	17
Social Science Education	598	319	279	142	61	81	8	2	6
Social Studies Education	934	530	404	139	78	61	10	6	4
Trade & Industrial Education	1,856	1,521	335	863	499	364	71	44	27
Education, Other	86,547	21,311	65,236	46,762	10,719	36,043	5,022	2,588	2,434
Engineering	**72,248**	**62,647**	**9,601**	**18,830**	**17,084**	**1,746**	**2,822**	**2,697**	**125**
Engineering, General	3,357	2,829	528	1,311	1,204	107	284	275	9
Aerospace Engineering	2,127	1,955	172	491	454	37	90	88	2
Agricultural Engineering	776	689	87	131	125	6	40	39	1
Architectural Engineering	465	373	92	28	28	0	0	0	0
Bioengineering	529	384	145	228	189	39	43	37	6
Ceramic Engineering	311	243	68	74	59	15	22	20	2
Chemical Engineering	7,185	5,569	1,616	1,368	1,204	164	319	298	21
Civil Engineering	9,989	8,668	1,321	3,074	2,780	294	340	327	13
Computer Engineering	1,015	874	141	287	245	42	23	22	1
Elec, Comm. Engineering	18,049	16,275	1,774	4,531	4,238	293	550	541	9
Engineering Mechanics	302	262	40	172	155	17	55	54	1
Engineering Physics	291	263	28	77	75	2	14	14	0
Engineering Sciences	216	181	35	81	73	8	22	19	3
Environ. Health Engineering	228	162	66	394	307	87	35	34	1
Geological Engineering	347	283	64	54	46	8	6	6	0
Geophysical Engineering	93	74	19	10	7	3	2	2	0
Industrial Engineering	3,748	2,761	987	1,432	1,226	206	118	107	11
Materials Engineering	434	333	101	301	248	53	146	127	19
Mechanical Engineering	15,675	14,232	1,443	2,511	2,362	149	299	291	8
Metallurgical Engineering	645	528	117	253	224	29	79	74	5
Mining & Mineral Engineering	597	553	44	131	121	10	22	22	0
Naval & Marine Engineering	629	601	28	62	62	0	2	2	0
Nuclear Engineering	391	365	26	292	276	16	109	103	6
Ocean Engineering	181	166	15	85	82	3	15	15	0
Petroleum Engineering	1,294	1,143	151	174	162	12	14	14	0
Surveying & Mapping Sciences	74	67	7	17	16	1	4	4	0
Cartography	11	6	5	6	5	1	0	0	0
Systems Engineering	270	219	51	149	122	27	24	24	0
Textile Engineering	41	27	14	0	0	0	0	0	0
Engineering, Other	2,978	2,562	416	1,106	989	117	145	138	7
Engineering & Related Technologies	**16,951**	**15,601**	**1,350**	**520**	**469**	**51**	**9**	**9**	**0**
Electronic Technology	2,413	2,298	115	0	0	0	0	0	0
Industrial Technology	3,306	2,975	331	130	115	15	2	2	0
Technologies, Other	11,232	10,328	904	390	354	36	7	7	0
Foreign Languages	**9,685**	**2,485**	**7,200**	**1,759**	**604**	**1,155**	**488**	**210**	**278**
German	1,367	489	878	281	115	166	68	23	45
French	2,871	548	2,323	360	93	267	106	32	74
Spanish	3,349	746	2,603	506	145	361	129	58	71
Other Foreign Languages	2,098	702	1,396	612	251	361	185	97	88
Allied Health	**13,204**	**2,302**	**10,902**	**2,604**	**707**	**1,897**	**46**	**26**	**20**
Dental Services	1,209	24	1,185	25	5	20	0	0	0
Medical Technology	2,095	357	1,738	19	12	7	0	0	0
Occupational Therapy	1,807	112	1,695	234	22	212	0	0	0
Physical Therapy	2,581	507	2,074	303	105	198	1	1	0
Allied Health, Other	6,721	1,326	5,395	2,048	568	1,480	45	25	20
Health Sciences	**51,410**	**7,902**	**43,508**	**14,464**	**3,525**	**10,939**	**1,109**	**623**	**486**
Speech Pathology/Audiology	3,041	164	2,877	2,859	210	2,649	93	31	62
Health Care Administration	2,267	566	1,701	1,729	826	903	14	10	4
Medical Laboratory	1,508	273	1,235	92	31	61	1	0	1
Nursing	31,442	1,477	29,965	4,451	153	4,298	124	7	117
Pharmacy	5,708	2,913	2,795	331	208	123	111	86	25
Health Sciences, Other	7,444	2,509	4,935	5,002	2,097	2,905	766	489	277

TABLE 2-14 Continued

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1982-83 (continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
Home Economics	15,555	780	14,775	2,285	205	2,080	241	76	165
Vocational Home Economics	1,150	174	976	121	17	104	14	8	6
Law	1,099	457	642	2,091	1,603	488	72	55	17
Letters	32,743	11,196	21,547	5,767	2,014	3,753	1,176	569	607
English, General	22,656	7,394	15,262	3,533	1,218	2,315	666	307	359
Literature, English	1,278	501	777	197	63	134	66	35	31
Speech, Debate & Forensic	5,596	2,164	3,432	665	201	464	96	56	40
Letters, Other	3,213	1,137	2,076	1,372	532	840	348	171	177
Liberal/General Studies	18,514	8,505	10,019	889	346	543	55	29	26
Library & Archival Science	258	28	230	3,979	735	3,244	52	21	31
Life Sciences	39,982	21,564	18,418	5,696	3,214	2,482	3,341	2,266	1,075
Biology, General	28,022	14,965	13,057	2,354	1,342	1,012	521	344	177
Biochem & Biophysics	1,876	1,160	716	270	165	105	518	366	152
Microbiology	2,141	1,007	1,134	406	215	191	319	203	116
Zoology	2,805	1,651	1,154	336	195	141	204	135	69
Life Sciences, Other	5,138	2,781	2,357	2,330	1,297	1,033	1,779	1,218	561
Mathematics	12,453	6,995	5,458	2,837	1,858	979	698	582	116
Military Science & Technology	267	238	29	110	109	1	0	0	0
Multi-Interdisciplinary Studies	17,282	8,705	8,577	2,930	1,676	1,254	387	232	155
Parks & Recreation	5,198	1,926	3,272	565	264	301	33	23	10
Philosophy and Religion	6,483	4,341	2,142	1,091	667	424	404	306	98
Theology	6,053	4,411	1,642	4,782	3,288	1,494	1,208	1,119	89
Physical Sciences	23,234	16,884	6,350	5,277	4,146	1,131	3,269	2,811	458
Astronomy	75	55	20	58	47	11	60	52	8
Astrophysics	20	17	3	9	8	1	17	17	0
Atmospheric Sci & Meteorology	396	330	66	183	159	24	80	75	5
Chemistry	10,796	7,166	3,630	1,622	1,162	460	1,746	1,451	295
Geology	5,704	4,224	1,480	1,332	1,021	311	222	187	35
Geochemistry, Geophysics & Seismology	208	165	43	124	99	25	49	42	7
Geological Sciences, Other	190	145	45	96	79	17	24	16	8
Oceanography	128	113	15	103	77	26	76	59	17
Earth Science	670	472	198	121	80	41	33	21	12
Physics	3,793	3,311	482	1,351	1,193	158	858	797	61
Physical Science, Other	1,254	886	368	260	206	54	89	78	11
Science Technology	171	132	39	13	11	2	0	0	0
Psychology	40,364	13,105	27,259	8,378	3,238	5,140	3,108	1,621	1,487
Protective Services	12,579	7,610	4,969	1,300	951	349	38	30	8
Criminal Justice	9,341	5,605	3,736	765	537	228	32	24	8
Law Enforcement	1,392	975	417	78	55	23	0	0	0
Protective Services, Other	1,846	1,030	816	457	359	98	6	6	0
Public Affairs	14,628	3,418	11,210	16,154	6,025	10,124	347	184	163
Social Sciences	95,088	52,708	42,380	11,112	6,916	4,196	2,931	2,042	889
Anthropology	2,806	992	1,814	788	363	425	369	194	175
Archeology	56	18	38	27	9	18	9	3	6
Criminology	1,337	758	579	61	38	23	5	5	0
Economics	20,518	13,692	6,825	1,972	1,503	469	734	613	121
Geography	3,341	2,234	1,107	573	383	190	121	88	36
History	16,465	10,189	6,276	2,040	1,259	781	575	389	186
International Relations	2,702	1,264	1,438	1,137	744	393	44	32	12
Political Science & Govt.	25,791	15,658	10,133	1,829	1,286	543	435	334	101
Sociology	14,105	4,273	9,832	1,112	485	627	522	301	221
Social Sciences, Other	7,964	3,627	4,337	1,530	817	713	109	80	29
Skilled Trades	1,951	1,667	284	91	87	4	0	0	0
Visual and Performing Arts	39,251	14,592	24,699	8,742	4,011	4,731	692	404	288
Design	4,049	1,437	2,612	248	135	113	1	0	1
Dramatic Arts	5,208	2,148	3,060	1,157	572	585	97	57	40
Fine Arts	10,847	3,386	7,461	1,596	677	919	22	12	10
Music	7,910	3,701	4,209	3,551	1,757	1,794	421	287	134
Visual & Performing Arts, Other	11,237	3,920	7,317	2,190	870	1,320	151	48	103

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1986

TABLE 2-15

BACHELOR'S GRADUATES IN SCIENCE AND ENGINEERING, BY BROAD FIELD AND MINORITY GROUP, 1983

	TOTAL	WHITE	BLACK	NATIVE AMERICAN	HISPANIC*	ASIAN
Total Sci. and Eng	304,082	266,414	16,799	1,065	9,654	10,150
Science	240,824	210,451	14,913	899	7,717	6,844
Physical Science	21,889	19,746	832	66	526	719
Math Science	11,470	10,031	629	27	253	530
Computer Science	22,152	19,027	1,274	72	654	1,125
Life Sciences	57,152	50,668	2,437	211	1,911	1,925
Psychology	38,540	33,106	2,995	150	1,470	819
Social Sciences	89,621	77,873	6,746	373	2,903	1,726
Engineering	63,258	55,963	1,886	166	1,937	3,306

*Exclusive of all racial groups

Note: The data for Bachelor's Degrees by race and sex were received from the Office for Civil Rights just at press time, in the form of data from individual schools with no column totals. A table similar to that for master's and doctoral degrees on the following two pages will be available later from the Commission on Professionals in Science and Technology. If you need it, please send a stamped, pre-addressed envelope to CPST at 1500 Massachusetts Ave., N.W., Suite 831, Washington D.C. 20005 with your request.

Source: Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity and Sex, Academic Year 1982-83, U.S. Dept. of Education, Office for Civil Rights, Unpublished

TABLE 2-15 Continued

MASTER'S DEGREES IN BROAD FIELDS, BY RACE, ETHNICITY, SEX AND FIELD, 1982-83

Major Field of Study	Total	White non-Hispanic		Black non-Hispanic		Hispanic		Asian/Pac. Islander		Am. Indian/ Alaskan Nat.		Nonresident Alien	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
ALL FIELDS	290,808	89,523	71,963	21,842	53,574	3,089	3,687	4,416	2,763	456	463	17,371	6,757
Agribusiness & Agric. Prod.	834	362	128	13	4	13	3	8	3	3	0	28	195
Agricultural Sciences	2,282	989	481	36	11	51	18	49	22	10	3	422	100
Architec./Environ. Design	3,376	1,496	843	90	58	60	27	83	34	7	2	399	118
Area Studies	834	234	290	19	18	21	21	12	6	1	1	44	56
Business/Management	65,433	36,299	15,267	1,520	918	788	347	1,228	558	99	33	3,861	978
Business & Office	31	6	6	2	4	0	0	1	1	0	0	0	2
Communications	3,506	1,218	1,453	66	120	19	27	27	33	3	2	156	144
Communications Technologies	102	43	46	2	3	0	0	0	0	0	0	4	3
Computer/Inform. Sciences	5,321	2,460	906	69	49	27	20	284	145	5	2	821	351
Education	85,112	1,633	5,385	17,973	49,404	679	1,739	254	618	140	260	1,322	1,402
Engineering	18,842	9,070	1,116	292	48	282	43	1,332	137	33	3	4,882	297
Engineering & Related Technologies	520	362	43	15	6	8	0	11	0	0	0	65	3
Foreign Languages	1,779	403	797	8	25	61	105	5	33	1	0	94	176
Allied Health	2,630	594	1,602	27	102	15	25	16	35	2	5	39	88
Health Services	14,589	2,658	9,281	131	472	126	257	139	257	15	33	383	317
Home Economics*	2,406	174	1,753	8	87	3	34	6	55	5	0	23	133
Law	2,091	1,190	340	31	14	33	14	32	10	2	1	284	86
Letters	5,770	1,620	3,066	37	86	26	63	41	63	8	11	206	283
Library Sciences/General Studies*	4,888	885	3,275	42	146	11	32	18	62	4	9	74	148
Life Sciences	5,735	2,574	2,009	80	73	83	46	84	75	10	5	256	152
Mathematics	2,839	1,176	669	38	30	31	17	97	39	4	2	464	196
Parks & Recreation	565	223	270	6	12	2	1	2	2	0	2	27	14
Philosophy and Religion	1,092	509	361	18	5	27	10	6	4	2	1	73	29
Protective Services	1,333	788	241	86	76	12	8	4	1	4	1	39	3
Physical Sciences	5,288	2,994	849	68	32	60	22	157	49	7	0	655	135
Psychology	8,439	2,655	4,086	150	316	102	158	34	52	15	26	146	251
Public Affairs	16,309	4,513	7,939	472	1,034	198	397	103	204	39	46	527	241
Renewable Natural Resources	1,156	746	242	2	1	8	3	10	7	2	1	101	9
Social Services	11,117	4,606	3,101	264	244	143	116	209	106	19	9	1,331	485
Theology	4,782	2,344	1,186	91	37	58	12	44	13	4	0	280	66
Interdisciplinary Studies	2,930	1,347	945	48	35	33	23	38	12	5	2	84	40
Transportation & Material Moving	91	60	4	1	0	3	0	1	0	0	0	22	0
Visual & Performing Arts	8,743	3,270	3,973	136	104	103	102	81	127	9	7	293	251

* Includes Vocational Home Economics *Includes Archival Science

Source: Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity and Sex, Academic Year 1982-83, U.S. Dept. of Education, Office for Civil Rights, Unpublished

TABLE 2-15 Continued

DOCTORAL DEGREES* BY RACE, ETHNICITY, SEX AND FIELD, 1980-81

Major Field of Study	Total	White non-Hispanic		Black non-Hispanic		Hispanic		Asian/Pac. Islander		Am. Indian/ Alaskan Nat.		Nonresident Alien	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
ALL FIELDS	32,899	15,387	8,696	987	946	387	239	717	277	69	59	3,744	719
Agribusiness & Agricultural Prod.	196	80	11	2	0	1	1	1	0	2	0	53	5
Agricultural Sciences	743	399	71	14	2	6	0	34	9	0	0	171	17
Architec/Environ. Design	97	32	13	1	0	1	0	2	1	1	0	30	9
Area Studies	197	74	58	3	2	3	1	1	1	1	1	10	1
Life Sciences	3,349	1,770	904	21	19	33	14	90	46	2	1	221	72
Business Management	809	429	107	13	6	10	0	30	5	0	0	146	17
Communications	205	88	68	6	3	0	0	1	2	0	1	17	4
Communication Technologies	9	4	3	0	0	0	0	0	0	0	0	2	0
Computer/Infor. Sciences	282	149	20	2	2	4	0	16	4	0	0	58	8
Education	7,991	2,879	3,055	222	302	71	72	45	54	19	23	407	157
Engineering	2,822	1,155	78	24	1	35	2	215	5	7	2	1,121	34
Engineering & Related Technologies	9	5	0	0	0	0	0	0	0	0	0	4	0
Foreign Languages	488	141	199	4	3	25	25	6	3	0	1	28	53
Allied Health	46	19	12	0	0	0	0	1	0	0	0	2	0
Health Services	1,112	487	381	11	21	6	9	32	19	1	3	89	44
Home Economics	299	63	136	5	7	2	0	2	5	0	1	6	9
Law	72	31	12	3	7	4	1	1	0	0	0	12	1
Letters	1,178	442	513	2	9	21	9	5	12	2	1	62	35
Library Science*	107	37	41	1	10	0	0	3	0	0	0	6	7
Mathematics	698	361	81	1	2	14	3	22	1	0	0	169	24
Parks & Recreation	33	20	7	0	2	0	0	0	0	0	0	2	0
Philosophy & Religion	404	280	85	5	3	4	1	3	1	0	0	22	6
Physical Sciences	3,270	2,009	349	34	1	19	9	122	30	10	0	691	66
Protective Services	38	20	7	3	1	2	0	1	0	0	0	2	0
Psychology	3,120	1,402	1,292	98	91	60	66	33	44	16	22	64	57
Public Affairs	367	128	121	11	18	9	7	4	2	1	0	20	6
Social Services	2,931	1,439	710	80	27	40	18	44	20	5	1	379	78
Theology	1,208	898	78	34	3	9	2	21	0	0	0	64	2
Interdisciplinary Studies	387	80	114	8	1	6	1	4	1	1	0	35	8
Visual & Performing Arts	692	346	249	6	5	4	4	2	11	0	0	23	14

* Includes Ed.D. and comparable degrees at the doctoral level. Excludes first-professional degrees.

*Includes Vocational Home Economics **Includes Archival Science.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982 and Earned Degrees, 1982 and 1983, National Center for Education Statistics, Unpublished

TABLE 2-16

GRADUATE DEGREE ATTAINMENT RATES IN SCIENCE AND ENGINEERING, BY SEX, 1972-84

Bachelor's		Master's		Attainment	Bachelor's		Ph.D.s		Attainment
Year	Number	Year	Number	Rate	Year	Number	Year	Number	Rate
				Men					
1970	195,244	1972	44,010	22.5	1965	128,723	1972	16,906	13.1
1971	198,180	1973	44,474	22.4	1966	133,989	1973	16,551	12.4
1972	203,557	1974	43,630	21.4	1967	143,847	1974	15,706	10.7
1973	211,552	1975	42,847	20.3	1968	158,711	1975	15,522	9.8
1974	213,269	1976	42,675	20.0	1969	181,323	1976	14,883	8.2
1975	201,578	1977	43,577	21.6	1970	195,244	1977	14,311	7.3
1976	196,577	1978	42,547	21.6	1971	198,180	1978	13,735	6.9
1977	191,090	1979	40,416	21.2	1972	203,557	1979	13,662	6.7
1978	188,107	1980	40,010	21.3	1973	211,552	1980	13,398	6.3
1979	186,333	1981	39,797	21.4	1974	213,269	1981	13,602	6.4
1980	186,009	1982	40,020	21.5	1975	201,578	1982	13,479	6.7
1981	184,748	1983	41,241	22.3	1976	196,577	1983	13,961	7.1
					1977	191,090	1984	14,005	7.3
				Women					
1970	68,878	1972	9,557	13.9	1965	36,213	1972	2,103	5.8
1971	72,996	1973	9,760	13.4	1966	39,482	1973	2,450	6.2
1972	77,671	1974	10,545	13.6	1967	44,002	1974	2,607	5.9
1973	83,839	1975	11,005	13.1	1968	53,463	1975	2,836	5.3
1974	91,793	1976	12,072	13.2	1969	63,196	1976	2,981	4.7
1975	93,342	1977	13,154	14.1	1970	68,878	1977	3,107	4.5
1976	95,597	1978	13,690	14.3	1971	72,996	1978	3,313	4.5
1977	97,453	1979	14,040	14.4	1972	77,671	1979	3,583	4.6
1978	100,060	1980	14,383	14.4	1973	83,839	1980	3,801	4.5
1979	102,292	1981	15,014	14.7	1974	91,793	1981	4,021	4.4
1980	105,974	1982	15,768	14.9	1975	93,342	1982	4,135	4.4
1981	106,842	1983	16,898	15.8	1976	95,597	1983	4,838	5.0
					1977	97,453	1984	5,003	5.1

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics; and Series of Doctorate Recipients from U.S. Universities, National Academy of Sciences

TABLE 2-17

NUMBER AND PROPORTION OF DEGREES IN SCIENCE EARNED BY WOMEN, 1960-1983

FIELD	BACHELOR'S DEGREES			DOCTORATES		
	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W
Social Sciences*	1,484,025	546,828	36.8	45,680	8,244	18.1
Psychology	765,835	404,937	52.9	49,139	18,098	36.8
Life Sciences	1,138,545	344,314	30.2	79,859	15,077	18.9
Math/Stat/Comp.	532,952	190,436	35.7	24,790	2,285	9.2
Physical Science	441,283	80,268	18.2	78,542	5,684	7.2
TOTAL SCIENCE	4,362,595	1,566,783	35.9	278,010	49,388	17.8
Engineering	1,076,454	49,350	4.6	59,693	943	1.6
TOTAL SCIENCE & ENG.	5,439,049	1,616,133	29.7	337,703	50,331	14.9

*Sociology, Anthropology, Economics, Political Science and Government

SOURCE: Series of Earned Degrees Conferred, 1965-1983, National Center for Education Statistics, using National Science Foundation field definitions.

TABLE 2-18

SCIENCE AND ENGINEERING MASTER'S DEGREES, 1965-1983

Year	Total S/E	Physical Sciences[1]	Engineering	Math/ Computer Sciences	Life Sciences	Social Sciences[2]
	ALL MASTER'S DEGREES					
1965	33,835	4,918	12,056	4,294	5,978	6,589
1966	38,083	4,992	13,678	5,010	6,666	7,737
1967	41,800	5,412	13,885	5,733	7,465	9,305
1968	45,425	5,508	15,188	6,081	8,315	10,333
1969	48,425	5,911	15,243	6,735	8,809	11,727
1970	49,318	5,948	15,597	7,107	8,590	12,076
1971	50,624	6,386	16,347	6,789	8,320	12,782
1972	53,567	6,307	16,802	7,186	8,914	14,358
1973	54,234	6,274	16,758	7,146	9,080	14,976
1974	54,175	6,087	15,393	7,116	9,605	15,974
1975	53,852	5,830	15,434	6,637	9,618	16,333
1976	54,747	5,485	16,170	6,466	9,823	16,803
1977	56,731	5,345	16,889	6,496	10,707	17,294
1978	56,237	5,576	17,015	6,421	10,711	16,514
1979	54,456	5,464	16,193	6,101	10,719	15,979
1980	54,391	5,233	16,846	6,515	10,278	15,519
1981*	54,811	5,284	17,366	6,787	9,731	15,620
1982	55,788	5,514	17,526	7,662	9,755	15,331
1983	58,139	5,290	18,830	8,158	9,950	15,911
	DEGREES AWARDED TO WOMEN					
1965	4,082	513	44	812	1,162	1,551
1966	4,882	528	76	1,018	1,380	1,880
1967	5,717	553	78	1,310	1,517	2,259
1968	6,512	635	99	1,361	1,864	2,553
1969	7,314	668	113	1,566	2,016	2,951
1970	8,577	847	172	1,809	2,216	3,533
1971	8,658	853	187	1,688	2,190	3,740
1972	9,557	888	281	1,777	2,327	4,284
1973	9,760	847	288	1,730	2,237	4,658
1974	10,545	887	362	1,793	2,410	5,093
1975	11,005	848	396	1,766	2,411	5,584
1976	12,072	825	589	1,690	2,619	6,349
1977	13,154	887	733	1,766	3,011	6,757
1978	13,690	946	871	1,717	3,226	6,930
1979	14,040	992	990	1,632	3,460	6,966
1980	14,383	975	1,190	1,800	3,326	7,092
1981*	15,041	1,084	1,406	1,848	3,280	7,393
1982	15,768	1,196	1,573	2,216	3,472	7,311
1983	16,898	1,133	1,746	2,487	3,607	7,925

[1] Includes Environmental Science
[2] Includes Psychology

*Beginning with 1981 NCES data are for 50 states & D.C. only. Prior years include Territories and Protectorates (Guam, VI, PR, etc.).

SOURCE: Series of Earned Degrees Conferred, 1965-1983, National Center for Education Statistics, using National Science Foundation field definitions.

TABLE 2-19

SCIENCE AND ENGINEERING BACHELOR'S DEGREES, 1965-1983

Year	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
	ALL BACHELOR'S DEGREES					
1965	164,936	17,916	36,795	19,668	34,842	55,715
1966	173,471	17,186	35,815	20,182	36,864	63,424
1967	187,849	17,794	36,188	21,530	39,408	72,929
1968	212,173	19,442	37,614	24,084	43,260	87,774
1969	244,519	21,591	41,553	28,263	48,713	104,399
1970	264,122	21,551	44,772	29,109	52,129	116,561
1971	271,176	21,549	45,387	27,306	51,461	125,473
1972	281,228	20,887	46,003	27,350	53,484	133,604
1973	295,391	20,809	46,989	27,528	59,486	140,579
1974	305,062	21,287	43,530	26,570	68,226	145,449
1975	294,920	20,896	40,065	23,385	72,710	137,864
1976	292,174	21,559	39,114	21,749	77,301	132,451
1977	288,543	22,628	41,581	20,729	78,472	125,143
1978	288,167	23,175	47,411	19,925	77,138	120,518
1979	288,625	23,363	53,720	20,670	75,085	115,787
1980	291,983	23,661	59,340	22,686	71,617	114,779
1981	291,590	23,952	63,673	26,199	66,832	110,934
1982	298,847	24,052	67,400	31,866	63,884	111,645
1983	302,806	23,405	72,248	36,959	60,891	109,303
	DEGREES AWARDED TO WOMEN					
1965	36,213	2,532	139	6,453	8,277	18,812
1966	39,482	2,333	146	6,702	8,464	21,837
1967	44,002	2,402	184	7,334	8,948	25,134
1968	53,463	2,674	211	8,841	10,091	31,646
1969	63,196	2,952	313	10,348	11,308	38,275
1970	68,878	2,969	338	10,516	11,875	43,180
1971	72,996	3,014	365	9,818	11,803	47,996
1972	77,671	3,148	501	9,784	12,694	51,544
1973	83,839	3,121	580	9,985	14,570	55,583
1974	91,793	3,536	706	9,719	17,836	59,996
1975	93,342	3,838	860	8,656	20,811	59,177
1976	95,597	4,139	1,443	7,678	23,789	58,584
1977	97,453	4,551	2,086	7,488	25,609	57,719
1978	100,060	4,987	3,497	7,110	26,954	57,512
1979	102,292	5,287	4,919	7,421	27,548	57,117
1980	105,974	5,651	6,014	8,247	27,596	58,466
1981*	106,842	5,888	7,083	9,655	26,786	57,430
1982	111,541	6,186	8,299	12,055	26,282	58,719
1983	113,365	6,389	9,601	14,361	25,242	57,772

[1] Includes Environmental Science
[2] Includes Computer Science
[3] Includes Psychology
* Beginning with 1981 NCES data are for 50 states & D.C. only. Prior years include Territories and Protectorates (Guam, VI, PR, etc.).

CHAPTER 3

GENERAL PROFESSIONS

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FIELD: Professional Fields

SOURCE: Summary Table derived from information throughout Professional Women and Minorities

TABLE 3-1

APPROXIMATE PERCENTAGES OF WOMEN AND MINORITIES ENROLLED, GRADUATING AND WORKING IN THE PROFESSIONS

PROFESSION	WOMEN					MINORITIES				
	ENROLLMENTS		LATEST DEGREES		Labor Force Total	ENROLLMENTS		LATEST DEGREES		Labor Force Total
	1st Year	Total	Bachelor's/ 1st Prof.	Advan.		1st Year	Total	Bachelor's/ 1st Prof.	Advan.	
Accountants			45.4	34.1	40.9			9.0	7.6	8.4
Business Managers			41.2	28.7	33.6			11.0	9.7	8.1
Architects			34.8	33.8	10.8			9.4	9.7	6.0
Engineers	16.5	15.9	14.0	9.4	6.2	16.2	14.7	10.0	9.4	4.8
Lawyers	39.0	37.7	36.2	23.3	16.1	10.7	9.3	7.0	2.0	3.9
Journalists			61.8	53.2	46.2			11.0	9.7	4.6
Nurses			95.3	95.5	95.5			11.0		9.4
Physicians	34.2	32.5	30.1		16.0	20.3	17.8	13.6		10.1
Dentists	27.1	23.8	19.9		6.2	20.7	17.3	13.6		2.1
Optometrists		31.2	27.4		10.8		10.9	6.1		1.0
Osteopaths	26.3	24.6	20.4			8.7	6.6	4.4		9.0
Podiatrists	20.7	21.7	12.5		9.5		13.6	6.9		6.5
Veterinarians	49.0	49.1	41.5		16.8	5.6	4.7	4.6		1.3
Pharmacists	55.2	54.6	49.3	37.2	28.5		19.6	11.6	7.5	4.8
Clerics & Theologians			16.9	26.5	6.3			6.3	4.4	6.3
Librarians & Archivists			89.1	81.2	83.6			9.6	7.6	9.1

FIELD: Professional Fields

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 3-2

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920–FY1972			FY1973–FY1977			FY1978–FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
PROFESSIONAL FIELDS, TOTAL	**15,032**	**1,634**	**10.9**	**6,597**	**1,032**	**15.6**	**9,336**	**2,766**	**29.6**	**1,728**	**504**	**29.2**	**1,917**	**604**	**31.5**
Business Administration, Subtotal[1]	6,399	170	2.7	3,766	163	4.3	6,282	1,605	25.6	755	124	16.4	869	180	20.7
Accounting[2]										163	31	19.0	163	41	25.2
Banking & Finance[2]										94	10	10.6	123	14	11.4
Business Admin. & Mgmt.[2]										180	25	13.9	176	30	17.1
Business Economics[2]										25	1	4.0	30	6	20.0
Marketing Mgmt. & Research[2]										73	17	23.3	125	33	25.4
Business Statistics[2]										8	0	0.0	7	1	14.3
Operations Research[2]										38	9	23.7	45	7	15.6
Organizational Behavior[2]										53	16	30.2	70	24	34.3
Business & Mgmt., General[2]										36	3	8.3	51	7	13.7
Business & Mgmt., Other[2]										85	12	14.1	79	17	21.5
Communications, Subtotal[2]										252	103	40.9	255	105	41.2
Communications, Research[2]										51	15	29.4	65	28	43.1
Journalism[2,3]	406	32	7.9	94	11	11.7	93	22	23.7	21	8	38.1	17	2	11.8
Radio & Television[2]										27	9	33.3	20	3	15.0
Communications, General[2]										60	30	50.0	68	31	45.6
Communications, Other[2]										93	41	44.1	85	41	48.2
Other Professional Fields, Subtotal										721	277	38.4	793	319	40.2
Architecture/Environ. Design[4]	57	4	7							34	5	14.7	25	3	12.0
Home Economics	690	653	94.7	278	245	88.1	442	378	85.5	79	69	87.3	107	86	80.4
Law	1,315	56	4.3	133	7	5.3	115	7	6.1	19	0	0.0	24	2	8.3
Library & Archival Science	428	140	32.7	312	127	40.7	333	177	53.2	51	30	58.8	68	34	50.0
Public Administration[2]										114	26	22.8	126	34	27.0
Social Work	886	314	35.4	683	333	48.8	931	462	49.6	184	109	59.2	231	130	56.3
Theology	4,761	260	5.5	1,069	82	7.7	1,011	91	9.0	223	32	32.0	204	27	13.2
Professional Fields, Other[5]	90	5	5.6	262	64	24.4	129	24	18.6	17	5	35.3	8	3	37.5

[1] Originally "Business & Commerce, Business Administration," Changed to "Business Administration" in 1962, and to "Business Administration and Management" in 1983.

[2] Broken out in 1983.

[3] Originally "Writing & Journalism." Changed to "Journalism" in 1962.

[4] Dropped in 1962. Added in 1983 as "Architecture and Environmental Design."

[5] Added in 1968.

SOURCE: Earned Degrees Conferred Series, National Center for Education Statistics, 1947-48--1982-83; Journal of American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 243, No.9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24/31, 1982, copyright by the American Medical Association; A Review of Legal Education in the United States, Fall 1977, Fall 1979, and 1981-82, American Bar Association; and personal communication from the Association of American Medical Colleges, American Veterinary Medicine Association, American Dental Association, American Podiatry Association and the American Pharmaceutical Association.

TABLE 3-3

FIRST PROFESSIONAL DEGREES CONFERRED BY FIELD AND SEX, SELECTED YEARS 1947-48 THRU 1984-85

YEAR		MEDICINE		DENISTRY		OPTOMETRY		OSTEOPATHY		PODIATRY		VET. MEDICINE		LAW		THEOLOGY		ARCHITECTURE		PHARMACY	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1947-48	T	6,714		1,625		1,425						242		10,990				1,074		2,104	
	W	744	11.1	37	2.3	40	2.8					13	5.4	420	3.8			131	12.2	449	21.3
1949-50	T	5,612		2,579		1,801		346				803		14,312		3,221		2,563		5,751	
	W	584	10.4	18	0.7	19	1.1	19	5.5			12	1.5	421	3.0	211	6.6	122	4.8	441	7.7
1953-54	T	6,757		3,102		706		499				803		9,298		4,463		1,623		3,885	
	W	343	9.1	39	0.8	20	2.8	10	2.2			10	1.2	322	3.5	119	2.7	92	5.7	343	8.8
1957-58	T	6,861		3,065		264		466				809		9,394		4,989		1,612		3,782	
	W	351	5.1	34	0.9	1	0.4	6	1.3			13	1.6	272	2.9	61	1.2	76	4.7	391	10.3
1959-60	T	7,074		3,247		339		423				825		9,240		5,184		1,801		3,192	
	W	394	5.9	26	0.8	4	1.2	8	1.9			18	2.2	230	2.5	87	1.6	57	3.3	416	13.5
1963-64	T	7,342		3,196		305		352				852		10,679		4,423		2,059		2,207	
	W	432	6.3	14	0.4	5	1.7	4	1.1			32	3.9	307	2.9	65	1.5	78	3.9	254	11.5
1965-66	T	7,720		3,264		380		360		136		922		13,246		4,124		2,599		3,763	
	W	516	7.2	35	1.1	3	0.8	5	1.4	2	1.5	52	6.0	470	3.5	74	1.8	103	4.6	536	16.6
1970-71	T	8,986		3,777		531		472		241		1,252		17,652		5,055		5,578		4,593	
	W	829	9.2	46	1.2	13	2.4	11	2.3	5	2.0	98	7.8	1,293	7.3	118	2.3	667	12.0	951	25.2
1972-73	T	10,398		5,086		771		523		259		1,299		27,484		5,291		6,980		5,079	
	W	939	9.0	58	1.4	20	2.6	15	2.9	1	0.4	133	10.2	2,224	8.1	182	3.4	923	13.2	1,277	25.1
1974-75	T	12,550		4,809		792		665		353		1,415		29,497		5,098		8,238		6,487	
	W	1,654	13.2	149	3.1	40	5.1	35	5.3	4	1.1	225	15.9	4,455	15.1	348	6.8	1,435	17.4	1,821	28.1
1976-77	T	13,599		5,138		953		852		486		1,586		34,104		5,861		9,222		7,495	
	W	2,611	19.2	374	7.3	105	11.0	75	8.8	16	3.3	362	22.8	7,657	22.5	554	9.5	1,973	21.4	2,434	32.5
1977-78	T	14,279		5,189		1,014		944		543		1,635		34,402		6,367		9,266		7,296	
	W	3,069	21.5	566	10.9	133	13.1	118	12.5	26	4.3	401	24.5	8,945	26.0	722	11.3	2,199	23.7	2,584	35.4
1978-79	T	14,925		5,488		1,046		1,065		572		1,714		33,387		6,607		9,297		6,919	
	W	3,452	23.1	652	11.9	136	13.0	167	15.7	41	7.2	496	28.9	10,084	28.5	866	13.1	2,401	25.8	2,759	39.9
1979-80	T	15,046		5,321		1,085		1,011		580		1,852		35,855		7,012		9,176		7,122	
	W	3,523	23.4	719	13.5	170	15.7	159	15.7	73	12.6	615	33.2	10,828	30.2	1,009	14.4	2,548	27.8	2,919	41.0
1980-81	T	15,505		5,460		1,097		1,145		597		1,922		36,331		6,898		9,455		6,640	
	W	3,833	24.7	788	14.4	207	18.9	188	16.4	69	11.6	677	35.2	11,768	32.1	962	13.9	2,645	28.1	2,910	43.8
1981-82	T	15,985		5,550		1,113		1,017		599		1,886		35,543		6,091		9,728		6,448	
	W	3,991	25.0	825	14.9	224	20.0	186	18.3	63	10.5	668	35.4	11,607	32.7	1,084	15.7	2,903	29.9	3,031	47.0
1982-83	T	15,728		5,371		1,120		1,317		631		2,012		36,540		6,494		9,823		5,919	
	W	4,193	26.7	838	15.6	246	22.0	261	19.8	79	12.5	822	40.9	13,218	36.2	1,099	16.9	3,420	34.8	2,925	49.4
1983-84	T	16,343		5,274		1,171		1,287				2,138								5,393	
	W	4,632	28.3	1,089	20.6	285	24.3	262	20.4			887	41.5							2,657	49.3
1984-85	T	16,318		5,337		1,117															
	W	4,904	30.1	1,063	19.9	306	27.4														

SOURCE: "Degrees Awarded to Women," National Center for Education Statistics; and Earned Degrees 1979 to 1983, NCES, unpublished

TABLE 3-4

PROPORTION OF FIRST PROFESSIONAL DEGREES AWARDED TO WOMEN BY FIELD, 1972-73 - 1982-83

	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
Chiropractic	* %	* %	* %	* %	9.3%	8.5%	10.0%	10.6%	12.1%	16.6%	17.9%	20.1
Dentistry	1.2	1.4	2.0	3.1	4.5	7.4	11.2	11.8	13.5	14.4	15.4	17.1
Law, General	7.2	8.1	11.5	15.1	19.2	22.5	26.0	28.5	30.2	32.1	33.4	36.2
Medicine	9.0	9.0	11.2	13.2	16.2	19.2	21.5	23.1	23.4	24.7	25.0	26.7
Optometry	2.2	2.6	4.2	5.0	7.7	11.0	13.1	13.0	15.7	18.9	19.9	22.1
Osteopathic Medicine	3.5	2.9	2.8	5.3	7.2	8.8	12.5	15.7	15.7	16.4	17.9	19.4
Pharmacy	*	*	*	*	29.6	27.5	30.2	36.0	37.5	43.8	41.7	46.7
Podiatry or Podiatric Medicine	0.3	0.3	1.1	1.1*	2.6	3.3	4.8	7.2	12.6	11.6	10.5	12.5
Theological Professions, General	1.9	3.4	5.5	6.8	7.6	9.5	11.3	13.1	14.4	13.9	15.7	16.9
Veterinary Medicine	9.4	10.2	11.2	15.9	18.1	22.8	24.5	28.9	32.8	35.2	36.2	41.0
Other	20.8	11.8	26.1	11.0	10.0	47.8		13.1				
ALL FIELDS	6.3	7.1	9.9	12.5	15.6	18.7	21.5	23.6	24.9	26.6	27.5	29.9

* Data not available.

SOURCE: Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, Academic Year 1980-1981, U.S. Department of Education, Office for Civil Rights, Unpublished, and Data on Earned Degrees Conferred by Sex, Academic Year 1982-83, National Center for Education Statistics, unpublished.

Table 3-5

FIRST PROFESSIONAL DEGREES BY FIELD AND SEX, 1982-83, AND BY FIELD, RACIAL GROUP AND SEX, 1980-81

FIELD	TOTAL*			BLACK NON-HISPANIC*			HISPANIC*			ASIAN/PACIFIC ISLANDER*			AM. INDIAN/ ALASKAN NATIVE*			WHITE NON-HISPANIC*			NONRESIDENT ALIEN*		
	Total	Women	% W	Total	Women	% B	Total	Women	% H	Total	Women	% A/P	Total	Women	% A.I.	Total	Women	% Wh	Total	Women	% Al
All Fields	73,136	21,826	29.8	2,931	1,159	4.1	1,541	410	2.2	1,456	465	2.0	192	58	0.3	64,551	16,922	90.5	669	132	19.7
Dentistry	5,585	954	17.1	195	69	3.6	86	17	1.6	204	45	3.7	10	1	0.2	4,896	788	89.7	69	17	1.3
Medicine	15,484	4,134	26.7	769	324	5.0	395	90	2.5	446	117	2.9	51	12	0.3	13,725	3,263	88.5	121	27	0.8
Optometry	1,116	247	22.1	9	6	0.8	16	3	1.5	40	19	3.6	2	1	0.2	1,017	174	92.7	13	4	1.2
Osteopathic Med.	1,319	256	19.4	16	5	1.4	13	2	1.1	14	6	1.2	8	1	0.7	1,091	173	95.3	3	1	0.3
Pharmacy	705	329	46.7	20	12	3.0	19	8	2.9	115	52	17.3	3	1	0.5	471	195	70.9	36	15	5.4
Podiatry	631	79	12.5	20	7	3.4	12	2	2.0	8	2	1.3	1	1	0.2	552	57	92.5	4	0	0.7
Veterinary Med.	2,060	844	41.0	37	21	1.9	11	4	0.6	17	6	0.9	4	2	0.2	1,846	642	96.0	7	2	0.4
Chiropractic Med.	2,889	581	20.1	13	2	0.6	24	3	1.0	22	1	0.9	3	2	0.1	2,144	357	91.7	131	24	5.6
Law*	36,988	13,354	36.1	1,377	692	3.7	834	271	2.3	490	196	1.3	96	34	0.3	28,450	9,930	76.9	685	230	1.9
Theology*	6,494	1,099	16.9	289	53	4.5	84	14	1.3	49	9	0.8	13	4	0.2	4,683	882	72.1	210	11	3.2

* Data are for 1982-83, including minority data in Law and Theology. *All other minority data are for 1980-81, and percentages are calculated on 1980-81 totals.

SOURCE: Digest of Education Statistics, NCES: Review of Legal Education in the United States, 1978, and Fall--1980-84, American Bar Association; Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 246 No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; and Vol. 250, No. 12, September 23, 1983; Annual Report, Dental Education Series, 1975-78, 1980-84, American Dental Association; Fall Enrollments Questionnaire 1974-77 and Annual Statistical Report, 1981, American Association of Colleges of Osteopathic Medicine; and Personal Communications from the Association of American Veterinary Medical Colleges; the American Association of Dental Schools, American Association of Colleges of Podriatic Medicine, Association of American Medical Colleges and the American Association of Colleges of Osteopathic Medicine; Minorities and Women in the Health Fields, Health Resources Administration, 1984

Table 3-6

ENROLLMENT FOR FIRST PROFESSIONAL DEGREES BY FIELD AND SEX, SELECTED YEARS 1960 THUR 1985

YEAR		MEDICINE		DENTISTRY		OPTOMETRY		OSTEOPATHY		PODIATRY		VET. MEDICINE		LAW		THEOLOGY		ARCHITECTURE*	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1960-61	T	30,288		13,580		1,101						3,832		43,695				15,908*	
	W	1,745	5.8	88	0.6	40	3.6					137	3.6	1,651	3.8			780*	4.9
1966-67	T	28,685		11,826		1,671		1,431		678		2,245		46,878		9,949		1,151	
	W	2,099	7.3	180	1.5	37	2.2	32	2.2	9	1.3	183	8.1	2,032	4.3	294	3.0	85	7.4
1968-69	T	35,733		15,542		2,241		1,878		1,108		4,488		64,220		12,369		1,424	
	W	3,129	8.8	171	1.1	53	2.4	54	2.9	8	0.7	351	7.8	3,745	5.8	328	2.7	166	11.7
1971-72	T	43,965		17,433		2,691		2,301		1,267		5,163		94,416		22,789		6,262	
	W	4,730	10.8	355	2.0	86	3.2	79	3.4	15	1.2	593	11.5	9,075	9.6	890	3.9	1,126	18.0
1973-74	T	49,511		19,215		3,360		2,799		1,633		5,528		103,641		21,030		8,577	
	W	7,701	15.6	892	4.6	227	6.8	180	6.5	40	2.4	957	17.3	16,730	16.1	1,543	7.3	1,886	22.0
1975-76	T	55,622		20,517		3,811		3,438		2,105		5,694		113,205		23,960		10,231	
	W	11,386	20.5	1,987	9.7	415	10.9	364	10.6	108	5.1	1,337	23.5	26,403	23.3	2,412	10.1	2,555	25.0
1976-77	T	58,266		21,013		4,033		3,671		2,204		6,571		117,451				7,884	
	W	13,059	22.4	2,349	11.1	542	13.4	472	12.9	157	7.1	1,805	27.5	29,538	29.2			2,198	27.9
1977-78	T	60,039		21,510		4,440		3,926		2,388		6,903		118,557				10,789	
	W	14,218	23.7	2,796	13.0	699	15.7	570	14.8	259	10.8	2,129	30.8	32,538	27.5			3,385	31.4
1978-79	T	62,213		22,179		4,436		4,254		2,498		7,312		119,120				9,273	
	W	15,102	24.3	3,112	14.0	757	17.1	688	16.2	268	10.7	2,471	33.8	36,251	30.4			2,397	25.8
1979-80	T	63,800		22,482		4,500		4,479		2,531		7,007		122,801				7,778	
	W	16,141	25.3	3,482	15.5	868	19.3	775	17.3	305	12.1	2,570	36.7	38,627	31.5			2,649	34.1
1980-81	T	65,497		22,842		4,540		4,940		2,577		8,154		125,397				9,479	
	W	17,204	26.3	3,879	17.0	985	21.7	971	19.7	306	11.9	3,220	29.4	42,122	33.6			3,220	34.0
1981-82	T	66,485		22,621		4,541		5,304		2,584		8,499		127,312					
	W	18,555	25.0	4,227	18.7	1,077	23.7	1,108	20.9	361	14.0	3,576	42.0	44,902	35.3				
1982-83	T	66,886		22,235		4,561		5,822		2,608		8,682		127,828					
	W	19,627	29.3	4,457	20.0	1,173	25.7	1,317	22.6	428	16.4	4,028	46.4	47,083	36.8				
1983-84	T	67,327		21,428		4,539		6,212		2,556		8,816		127,195					
	W	20,635	30.6	4,733	22.1	1,291	28.4	1,526	24.6	476	18.6	4,152	47.1	47,980	37.7				
1984-85	T	67,016		20,588		4,460				2,616		8,917							
	W	21,316	31.8	4,899	23.8	1,391	31.2			569	21.7	4,376	49.1						
1985-86	T	66,585																	
	W	21,650	32.5																

*Includes Environmental Design after 1966.

SOURCE: National Center for Education Statistics, 1980 unpublished data; Journal of American Medical Association, Vol. 250, No. 12, Sept. 23, 1983, Copyright AMA; Personal communication, American Association of Dental Schools, 1985; Personal Communication, Association of American Veterinary Colleges, 1985; 1984 Review of Legal Education, Copyright ABA

TABLE 3-7

ENROLLMENTS FOR FIRST PROFESSIONAL DEGREES, BY SEX AND ETHNICITY, 1980 AND CURRENT YEAR

DEGREE	TOTAL		WHITE*		BLACK		ASIAN		AMERICAN INDIAN		HISPANIC		NON-RESIDENT ALIEN	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
1980														
Medicine	74,313	19,122	63,810	15,619	3,983	1,717	2,636	769	240	71	3,069	832	555	114
Percent of Total	100.0	25.7	85.9	21.0	5.4	2.3	3.6	1.0	0.3	0.1	4.1	1.1	0.8	0.2
Dentistry	26,813	3,936	19,642	3,017	1,001	382	971	231	144	17	770	220	285	69
Percent of Total	100.0	14.7	73.3	11.3	3.7	1.4	3.6	0.9	0.5	0.1	2.9	0.8	1.1	0.3
Veterinary Medicine	8,013	3,141	7,658	4,682	168	92	73	40	18	8	84	24	21	10
Percent of Total	100.0	39.2	95.6	58.4	2.1	1.2	0.9	0.5	0.2	0.1	1.1	0.3	0.3	0.1
Law	101,675	34,638	90,940	30,250	4,784	2,255	1,451	597	610	228	3,219	1,142	671	166
Percent of Total	100.0	34.1	89.4	29.8	4.7	2.2	1.4	0.6	0.6	0.2	3.2	1.1	0.7	0.2
CURRENT YEAR														
Medicine (1985-86)	66,585	21,650	54,335	17,013	3,849	1,796	4,289	1,470	235	95	1,571	528	400	114
Percent of Total	100.0	32.5	81.6	25.6	5.8	2.7	6.4	2.2	0.4	0.1	2.3	0.8	0.6	0.2
Dentistry (1985-86)	21,428	4,733	18,404	3,736	1,000	405	1,357	421	64	14	603	157		
Percent of Total	100.0	22.1	85.9	20.3	4.7	40.5	6.3	31.0	0.3	21.9	2.8	26.0		
Veterinary Medicine (1985-86)	8,917	4,376	8,498	4,143	160	106	93	56	32	12	134	59		
Percent of Total	100.0	49.1	95.3	46.5	1.8	1.2	1.0	0.6	0.4	0.1	1.5	0.7		
Law (1985-86)	127,195	41,159	115,329		5,967		1,962		441		3,496			
Percent of Total	100.0	32.4	90.7		4.7		1.5		0.4		2.8			

* Non-Hispanic

FIELD: Architecture and Environmental Design

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1982-83, U.S. Office of Education (NCES)

TABLE 3-8

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1982-83

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	5,578	667	12.0	1,724	243	14.1	36	3	8.3
1971-72	6,452	775	12.0	1,928	281	14.6	50	7	14.0
1972-73	6,980	923	13.2	2,319	364	15.7	58	4	6.9
1973-74	7,840	1,164	14.8	2,733	502	18.4	69	4	5.8
1974-75	8,238	1,435	17.4	2,953	599	20.3	69	11	15.9
1975-76	9,169	1,757	19.2	3,215	670	20.8	82	13	15.8
1976-77	9,222	1,973	21.4	3,213	724	22.5	73	11	15.1
1977-78	9,266	2,199	23.7	3,121	812	26.0	73	16	21.9
1978-79	9,297	2,401	25.8	3,124	889	28.5	96	22	22.9
1979-80	9,176	2,548	27.8	3,157	900	28.5	79	13	16.5
1980-81	9,455	2,655	28.1	3,153	919	29.1	93	20	21.5
1981-82	9,728	2,903	29.8	3,327	1,085	32.6	80	22	27.5
1982-83	9,823	3,420	34.8	3,357	1,133	33.8	97	23	23.7
TOTAL	110,224	24,820	22.5	37,324	9,121	24.4	955	169	17.7

SOURCE: Personal Communication with American Institute of Architects, December, 1985

TABLE 3-9

AIA MEMBERSHIP BY RACE AND SEX, 1985

Estimated registered architects in U.S.		71,300
Members of AIA		49,009
Women*		3,093
Minorities*		2,571
Indian/Eskimo/Aleut	53	
Asian/Pacific Islander	1,294	
Hispanic	731	
Black	395	
Other	198	
AIA member owned architecture firms		14,417
Headed by women	348	
Headed by minorities	653	

*Includes only those who indicated sex and/or ethnicity.

FIELD: Architecture

SOURCE: American Institute of Architects

TABLE 3-10

TOTAL ENROLLMENTS IN ARCHITECTURE BY TYPE OF PROGRAM, SEX, MINORITY STATUS AND CITIZENSHIP, 1975 AND 1985

YEAR AND TYPE OF DEGREE PROGRAM	TOTAL	WOMEN	% WOMEN	MINORITY	% MINORITY	FOREIGN	% FOREIGN
Non-Accredited Degree*							
1975	14,520	1,923	13.2	1,266	8.7	580	4.0
1985	11,584	3,358	29.0	1,850	16.0	1,041	9.0
Baccalureate in Architecture (5-Year Program)							
1975	15,289	1,938	12.7	1,338	8.7	3,653	23.9
1985	16,479	4,114	25.0	2,939	17.8	1,972	12.0
Master's in Architecture							
1975	2,754	403	14.6	306	11.1	222	8.1
1985	4,246	1,440	33.9	563	13.3	695	16.4

* Baccalaureate in Architecture

FIELD: Accounting

SOURCE: Minority Recruitment and Equal Opportunity Committee 1981 ,1982 1983 and 1984 Report, by Sharon L. Donahue, American Institute of Certified Public Accountants

TABLE 3-11

NUMBER AND PERCENT OF PROFESSIONALS EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, SELECTED YEARS, 1976 - 1984

MINORITY GROUP	1976		1978		1980		1981		1982		1983		1984	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
American Indian	26	0.05	34	0.06	49	0.07	51	0.07	51	0.07	50	0.06	42	0.05
Asians	641	1.14	831	1.40	1,061	1.58	1,349	1.85	1,454	1.90	1,346	1.68	1,567	1.87
Blacks	955	1.70	1,042	1.76	1,204	1.80	1,193	1.63	1,185	1.55	1,132	1.42	1,125	1.35
Hispanics	541	0.96	620	1.04	662	1.00	788	1.08	905	1.18	1,037	1.30	1,073	1.28
Total Minority	2,163	3.84	2,527	4.26	2,967	4.44	3,381	4.63	3,595	4.69	3,565	4.46	3,807	4.55
Total Women	5,783	10.27	8,514	14.34	13,294	19.84	15,984	21.88	18,509	24.14	20,850	26.10	22,818	27.29
Total Professionals	56,336	100.00	59,352	100.00	67,005	100.00	73,046	100.00	76,670	100.00	79,896	100.00	83,610	100.00

TABLE 3-12

PLACEMENT OF ACCOUNTING GRADUATES FROM THE HISTORICALLY BLACK AND MINORITY COLLEGES AND UNIVERSITIES, SELECTED YEARS, 1973 - 1983

PLACEMENT	1973		1975		1977		1979		1980		1981		1982		1983	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Public Accounting	126	15.1	170	16.4	147	13.6	201	11.3	180	10.2	208	13.4	154	10.2	147	11.7
Industry	244	29.1	306	29.6	396	37.3	543	30.6	544	30.9	488	31.4	422	28.0	370	29.4
Government	136	16.3	158	15.3	163	15.4	297	16.7	252	14.3	217	14.0	167	11.1	219	17.4
Nonprofit Org.	19	2.3	26	2.5	32	3.0	60	3.4	64	3.6	38	2.4	48	3.2	46	3.7
Graduate Schools	51	6.1	94	9.1	111	10.5	139	7.8	118	6.7	120	7.7	116	7.7	125	9.9
Other	38	4.5	34	3.3	31	2.9	39	2.2	58	3.3	66	4.2	40	2.7	37	2.9
Unknown	223	26.6	246	23.8	181	17.1	496	27.9	545	30.9	418	26.9	559	37.1	313	24.9
Total Graduates	837	100.0	1,034	100.0	1,061	100.0	1,775	100.0	1,761	100.0	1,555	100.0	1,506	100.0	1,257	100.0
Total Majors	4,003		5,936		7,303		11,914		10,851		10,380		10,138		8,757	

TABLE 3-13

NUMBER OF CPA'S EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, 1976 - 1983

MINORITY GROUP	1976	1977	1978	1979	1980	1981	1982	1983	1984
American Indian	14	14	15	22	26	23	26	23	17
Asians	171	195	235	316	375	445	473	414	511
Blacks	114	129	139	172	194	212	240	298	247
Hispanics	149	162	201	240	240	278	305	360	369
Total Minority	448	500	590	750	835	958	1,046	1,095	1,144
Total Women	1,080	1,532	1,944	2,631	3,493	4,665	5,510	6,432	6,870

FIELD: Accounting

Source: Minority Recruitment and Equal Opportunity Committee 1984 Report, American Institute of Certified Public Accountants.

TABLE 3-14

MINORITIES WHO ARE PARTNERS IN MAJOR ACCOUNTING FIRMS AND MINORITY ACCOUNTING FIRMS, 1984

MINORITY	MAJOR FIRMS	MINORITY FIRMS
American Indian	6	2
Asian	56	45
Black	23	78
Hispanics	62	74
Total Minority	147	199
Women	146	13
Total Professionals (Incl. Partners)	83,610	1,068

SOURCE: Earned Degrees Conferred Series, 1971-72 thru 1982-83, U.S. Office of Education (NCES)

TABLE 3-15

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1971-72 - 1982-83

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1971-72	24,801	2,494	10.1	1,377	108	7.9	51	0	0.0
1972-73	28,289	3,325	11.8	1,627	141	8.7	83	1	1.2
1973-74	29,770	4,176	14.0	1,806	189	10.5	70	4	5.7
1974-75	31,605	5,665	17.9	2,232	280	12.5	60	4	6.7
1975-76	35,806	7,645	21.4	2,730	478	17.5	55	5	9.1
1976-77	39,183	9,942	25.4	3,278	636	19.4	53	4	7.6
1977-78	40,856	12,047	29.5	3,389	729	21.5	44	3	6.8
1978-79	42,131	13,754	32.7	3,595	833	23.2	52	7	13.5
1979-80	43,556	15,760	36.2	3,496	965	27.6	51	9	17.7
1980-81	43,344	17,046	39.3	3,449	1,034	30.0	56	8	14.3
1981-82	45,542	19,329	42.4	3,246	1,086	33.5	61	8	13.1
1982-83	45,732	20,771	45.4	3,046	1,049	34.4	66	13	19.7
TOTAL	450,615	131,954	29.3	33,271	7,528	22.6	702	66	9.4

FIELD: Business Management

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 3-16

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1982-83

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	116,709	10,803	9.3	26,654	1,045	3.9	810	23	2.8
1971-72	123,306	11,966	9.7	30,511	1,207	4.0	902	20	2.2
1972-73	128,244	13,840	10.8	31,239	1,533	4.9	932	53	5.7
1973-74	133,905	17,481	13.1	32,820	2,161	6.6	983	50	5.1
1974-75	135,455	22,223	16.4	36,450	3,080	8.4	1,011	41	4.0
1975-76	145,035	28,783	19.8	42,728	4,974	11.6	956	52	5.4
1976-77	152,088	35,583	23.4	46,545	6,664	14.3	869	55	6.3
1977-78	163,274	44,604	27.3	48,661	8,216	16.9	867	72	8.3
1978-79	175,420	53,875	30.7	50,646	9,698	19.1	863	101	11.7
1979-80	189,224	63,883	33.8	55,322	12,355	22.3	796	115	14.4
1980-81	200,876	73,806	36.7	58,018	14,513	25.0	845	125	14.8
1981-82	215,817	84,718	39.3	61,428	17,069	27.8	857	152	17.7
1982-83	226,892	95,175	42.0	65,319	18,862	28.9	809	136	16.8
TOTAL	2,106,245	556,740	26.4	586,341	101,377	17.3	11,500	995	8.7

SOURCE: STAT Sheet, 1984, American Assembly of Collegiate Schools of Business

TABLE 3-17

BUSINESS FACULTY MEMBERS AT AACSB MEMBER SCHOOLS BY SEX AND ETHNICITY, 1983-84

	Percent
Male	85.4
Female	14.6
White	88.7
Black	2.2
Hispanic	0.6
Asian	3.6
American Indian	0.2
Foreign	4.7
Female (New Hires)	23.3

FIELD: Law

SOURCE: A Review of Legal Education in the United States--Fall 1978 thru 1983-84; American Bar Association Section of Legal Education and Admission to the Bar, copyright by the American Bar Association

TABLE 3-18

NUMBER OF TEACHERS IN ABA APPROVED LAW SCHOOLS BY SEX, 1977-78, 1980-81 AND 1983-84

	1977 - 1978			1980 - 1981			1983 - 1984		
	TOTAL	WOMEN	% W	TOTAL	Women	% W	TOTAL	WOMEN	% W
Full-Time	3,875	411	10.61	4,225	517	12.24	4,451	712	16.00
Part-Time	2,156	230	10.67	2,255	205	9.09	2,530	337	13.32
Teaching Deans & Administrators	344	32	9.30	465	96	20.65	503	121	24.06
TOTAL	6,375	673	10.56	6,945	818	11.78	7,484	1,170	15.63

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1982-83, U.S. Office of Education (NCES)

TABLE 3-19

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1982-83

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	545	27	5.2	955	46	4.8	20	0	0.0
1971-72	503	33	6.6	932	54	5.8	40	1	2.5
1972-73	474	40	8.4	1,071	80	7.5	37	1	2.7
1973-74	494	52	10.5	1,181	84	7.1	27	1	3.7
1974-75	436	62	14.2	1,245	100	8.0	21	0	0.0
1975-76	531	100	18.8	1,442	173	11.9	76	3	3.9
1976-77	559	154	27.5	1,574	208	13.2	60	8	13.3
1977-78	653	187	28.6	1,786	261	14.6	39	5	12.8
1978-79	678	274	40.4	1,647	255	15.5	46	7	15.2
1979-80	683	311	45.5	1,817	286	15.7	40	4	10.0
1980-81	776	388	50.0	1,832	326	17.8	60	4	6.7
1981-82	846	430	50.8	1,892	383	20.2	22	2	10.0
1982-83	1,099	642	58.4	2,091	488	23.3	72	17	23.6
TOTAL	8,277	2,700	32.6	19,466	2,744	14.1	560	53	9.5

FIELD: Law

SOURCE: A Review of Legal Education in the United States - Fall 1977 through Fall 1983, American Bar Association Section of Legal Education and Admission to the Bar©, American Bar Assocation.

TABLE 3-20

FIRST YEAR AND TOTAL ENROLLMENTS IN ABA APPROVED LAW SCHOOLS BY SEX AND ETHNICITY, 1969-70 - 1983-1984

YEAR	TOTAL	WOMEN		BLACK		HISPANIC*		ASIAN/PACIFIC ISLANDER		AM. INDIAN/ ALASKAN NATIVE	
	NO.	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
1969-70	29,128	*		1,115	3.83	309	1.06	*		44	0.15
	68,386	4,715	6.89	2,128	3.11	548	0.80			72	0.11
1970-71	34,713	*		*		*		*		*	
	82,499	7,031	8.52								
1971-72	36,171	*		1,716	4.74	526	1.45	254	0.70	71	0.20
	93,118	8,914	9.57	3,744	4.02	1,156	1.24	480	0.52	140	0.15
1972-73	35,131	*		1,907	5.43	649	1.85	298	0.85	79	0.22
	101,664	12,173	11.97	4,423	4.35	1,446	1.42	681	0.67	173	0.17
1973-74	37,108	*		1,943	5.25	729	1.97	327	0.88	109	0.29
	106,102	16,760	15.80	4,817	4.54	1,700	1.60	850	0.80	222	0.21
1974-75	38,074	*		1,910	5.02	874	2.30	429	1.13	110	0.29
	110,713	21,788	19.68	4,995	4.51	2,026	1.83	1,063	0.96	265	0.24
1975-76	39,038	*		2,045	5.24	818	2.10	436	1.12	118	0.30
	116,991	26,737	22.85	5,127	4.38	2,182	1.87	1,099	0.94	295	0.25
1976-77	39,996	*		2,128	5.32	953	2.38	484	1.21	133	0.33
	117,451	29,538	29.15	5,503	4.69	2,461	2.10	1,324	1.13	301	0.26
1977-78	39,676	11,928	30.06	1,945	4.90	983	2.48	510	1.28	137	0.35
	118,557	32,538	27.45	5,305	4.48	2,531	2.13	1,382	1.67	363	0.31
1978-79	40,479	*		2,021	5.00	1,078	2.66	557	1.38	145	0.36
	121,606	36,808	30.27	5,350	4.40	2,788	2.29	1,424	1.17	390	0.32
1979-80	40,717	*		2,002	4.92	1,075	2.64	577	1.42	171	0.42
	122,860	38,627	31.43	5,257	4.28	2,817	2.29	1,547	1.26	392	0.32
1980-81	42,296	*		2,144	5.07	1,176	2.78	641	1.52	163	0.39
	125,397	42,122	33.59	5,506	4.39	3,014	2.40	1,641	1.31	415	0.33
1981-82	42,521	15,811	37.18	2,238	5.26	1,266	2.98	650	1.52	160	0.38
	127,312	44,092	35.26	5,789	4.54	3,189	2.50	1,755	1.38	401	0.32
1982-83	42,034	16,136	38.39	2,217	5.27	1,319	3.14	731	1.74	154	0.37
	127,828	47,083	36.83	5,852	4.58	3,406	2.66	1,947	1.52	406	0.32
1983-84	41,159	16,049	38.99	2,247	5.46	1,266	3.08	711	1.73	169	0.41
	127,195	47,980	37.71	5,967	4.69	3,496	2.75	1,962	1.54	441	0.35

*Excludes University of Puerto Rico

FIELD: Legal and Kindred

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 3-21

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN LEGAL AND KINDRED OCCUPATIONS BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1984

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
Law Clerk	428	204	47.7	72	16.8	43	10.0	47	10.0	11	2.6	13	3.0	1	0.2	356	83.2
General Attorney	17,170	4,610	26.9	1,738	10.1	637	3.7	1,113	6.5	411	2.4	178	1.0	36	0.2	15,432	89.9
Estate Tax Examiner	14	0	0.0	1	7.1	0	0.0	1	7.1	0	0.0	0	0.0	0	0.0	13	92.9
Hearings and Appeals	1,217	221	18.2	151	12.2	55	4.5	88	7.2	32	2.6	28	2.3	3	0.2	1,066	87.6
Administrative Law Judge	1,122	46	4.1	58	5.2	7	0.6	26	2.3	25	2.2	3	0.3	4	0.4	1,064	94.8
Clerk of Court	5	4	80.0	1	20.0	1	20.0	1	20.0	0	0.0	0	0.0	0	0.0	4	80.0
Paralegal Specialist	2,893	1,823	63.0	633	21.9	498	17.2	495	17.1	85	2.9	34	1.2	19	0.7	2,260	78.1
Contract Representative	12,615	9,234	73.2	4,093	32.4	3,119	24.7	2,883	22.9	956	7.6	174	1.4	80	0.6	8,522	67.6
Patent Attorney	133	4	3.0	5	3.8	1	0.8	3	2.3	1	0.8	1	0.8	0	0.0	128	96.2
Patent Classifying	58	7	12.1	4	24.1	4	6.9	10	17.2	1	1.7	2	3.4	1	1.7	44	75.9
Patent Examing	1,278	144	11.3	204	16.0	46	3.6	119	9.3	20	1.6	64	5.2	1	0.1	1,074	84.0
Legal Instruments Exam. (Tech)	1,236	1,068	86.4	472	38.2	405	32.8	373	30.2	39	3.2	15	1.2	45	3.6	764	61.8
Legal Instr. Exam. (Clerical)	1,174	1,042	88.8	626	53.3	562	47.9	474	40.4	91	7.8	43	3.7	18	1.4	548	46.7
Land Law Examiner	365	271	74.3	71	19.5	60	16.4	19	5.2	41	11.2	4	1.1	7	1.9	294	80.5
Passport and Visa Examiner	1,136	467	41.1	231	20.3	135	11.9	157	13.8	41	3.6	30	2.6	3	0.3	905	79.7
Legal Clerk & Tech. (Tech)	2,514	2,214	88.1	742	29.5	659	26.2	564	22.4	134	5.3	31	1.2	13	0.5	1,772	70.5
Legal Clerk & Tech. (Cler)	4,286	3,950	92.9	1,382	32.2	1,255	29.3	1,011	23.6	255	5.9	72	1.7	44	1.0	2,904	67.8
Tax Law Specialist	687	175	25.5	77	11.2	37	5.4	57	8.3	10	1.5	10	1.5	0	0.0	610	88.8
General Claims Examiner	123	67	54.5	36	29.3	24	19.5	27	22.0	4	3.3	4	3.3	1	0.8	87	70.7
Workers Compensation Claims	587	274	46.7	156	26.6	106	18.1	123	21.0	15	2.6	14	2.4	4	0.7	431	73.4
Loss & Damage Claims	125	105	84.2	21	16.8	18	14.4	10	8.0	6	4.8	4	3.2	1	0.8	104	83.2
Social Ins. Claims Examiner	11,234	6,944	61.8	3,926	34.9	3,186	28.4	3,583	31.9	187	1.7	143	1.3	13	0.1	7,308	65.1
Unempl. Comp. Claims Exam.	103	79	76.7	56	54.4	47	45.6	55	53.4	0	0.0	1	0.0	0	0.0	47	45.6
Dependent & Estates Claims	71	55	77.5	27	38.0	19	26.8	23	32.4	2	2.8	2	2.8	0	0.0	44	62.0
Veterans Claims Examiner	2,519	857	34.0	427	17.2	261	10.4	323	12.8	68	2.7	30	1.2	6	0.2	2,092	83.0
Civil Serv. Ret. Claims Exam.	223	146	65.5	98	43.9	80	35.9	97	43.5	1	0.4	0	0.0	0	0.0	125	56.1
Claims Clerical	16,381	14,702	89.8	6,462	39.4	5,764	35.2	5,005	30.6	1,080	6.6	245	1.5	132	0.8	9,919	60.6

THE WORK FORCE

CHAPTER 4

GENERAL WORK FORCE

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SOURCE: 1980 Census of Population, Supplementary Report, May 1981, U.S. Department of Commerce

TABLE 4-1

POPULATION OF THE UNITED STATES BY AGE, SEX, RACE AND SPANISH ORIGIN, 1980

AGE	Total No.	% Female	PERCENT BY RACE AND SEX											
			White		Black		Native Am.		Asian		Other Race		HISPANIC*	
			% W	% F	% B	% F	% N.A.	% F	% A	% F	% O	% F	% H	% F
All Ages	226,504,825	51.4	83.2	51.3	11.7	52.8	0.6	50.6	1.6	51.6	3.0	54.4	6.5	50.2
Under 5	16,344,407	48.9	77.3	48.7	14.9	49.6	0.9	49.2	1.8	49.5	5.1	48.9	10.2	49.0
5 - 9	16,697,134	48.9	78.0	48.7	14.9	49.6	0.9	49.5	1.8	49.1	4.4	49.0	9.2	47.8
10 - 14	18,240,919	48.9	79.3	48.8	14.7	49.7	0.9	49.0	1.5	48.7	3.7	49.3	8.1	49.4
15 - 19	21,161,667	49.2	80.1	49.1	14.1	50.1	0.8	49.4	1.1	48.3	3.6	48.0	7.1	51.8
20 - 24	21,312,557	50.0	81.1	49.8	12.8	52.3	0.7	49.8	1.5	50.9	3.9	46.4	7.4	48.3
25 - 29	19,517,672	50.3	81.9	49.9	11.9	53.3	0.6	50.8	1.9	53.9	3.7	46.8	7.1	49.3
30 - 34	17,557,957	50.6	83.4	50.2	10.8	53.9	0.6	51.1	2.1	54.4	3.1	48.2	6.4	50.5
35 - 39	13,963,008	50.9	84.2	50.4	10.4	54.6	0.6	51.2	2.0	52.5	2.8	49.3	6.1	51.3
40 - 44	11,668,239	51.1	84.2	50.7	10.7	50.7	0.6	51.3	1.9	51.1	2.6	50.0	6.1	51.6
45 - 49	11,088,383	51.4	85.3	51.0	10.3	54.9	0.5	51.9	1.6	54.3	2.3	50.7	5.6	51.7
50 - 54	11,708,984	52.0	86.7	51.6	9.6	55.3	0.4	51.6	1.4	55.8	1.8	51.8	4.8	52.1
55 - 59	11,614,054	52.8	88.1	52.6	8.9	55.0	0.4	52.1	1.1	53.0	1.4	51.4	3.9	52.2
60 - 64	10,085,711	53.7	89.0	53.5	8.6	55.8	0.3	52.9	1.0	53.9	1.0	53.7	3.2	54.1
65 - 69	8,780,844	55.6	89.0	55.4	8.8	57.3	0.3	54.8	0.9	50.9	1.0	55.9	3.0	56.2
70 - 74	6,796,762	58.0	89.7	58.1	8.3	58.4	0.3	55.7	0.9	46.6	0.9	55.7	2.9	56.1
75 - 79	4,792,597	59.4	89.9	61.7	8.1	60.6	0.3	55.7	0.8	49.8	0.9	56.4	2.9	56.8
80 - 84	2,934,229	65.3	91.5	65.6	6.8	62.5	0.2	59.4	0.7	57.3	0.7	57.8	1.9	58.8
85 & Over	2,239,721	69.6	91.3	70.0	7.1	66.7	0.3	60.8	0.6	62.4	0.7	59.6	2.2	62.0
Median Age	30.0	31.3	31.3	32.6	24.9	26.2	23.0	23.5	28.6	29.3	22.3	22.4	23.2	23.3

* Persons of Hispanic Origin may be of any race.

SOURCE: 1981-82 Fact Book for Academic Administrators, American Council on Education

TABLE 4-2

18-YEAR OLDS BY SEX AND RACE, SELECTED YEARS, 1950-2000

Year	Population, Age 18[a] (in thousands)								
	All Races			Black & Other Races			Black		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1950	2,164	1,090	1,074	271	133	138	b	b	b
1960	2,613	1,323	1,289	312	155	157	288	143	145
1970	3,780	1,913	1,867	512	253	258	462	228	234
1975	4,243	2,146	2,096	629	314	315	559	278	281
1976	4,251	2,150	2,101	632	316	316	559	279	281
1977	4,241	2,142	2,099	649	324	325	573	285	288
1978	4,228	2,138	2,090	652	325	326	573	285	288
1979	4,291	2,172	2,119	666	334	333	583	291	292
	Series II Projections[c]								
1980	4,211	2,130	2,081	666	334	332	581	290	291
1981	4,185	2,098	2,048	667	335	332	580	290	290
1982	4,087	2,070	2,017	668	336	332	579	290	289
1983	3,917	1,979	1,938	661	331	329	569	284	285
1984	3,703	1,874	1,829	644	323	321	548	274	274
1985	3,604	1,822	1,782	621	311	310	525	262	263
1986	3,521	1,783	1,738	616	308	307	519	259	259
1987	3,567	1,805	1,762	631	316	315	530	265	265
1988	3,653	1,850	1,804	646	324	322	539	270	269
1989	3,733	1,895	1,838	683	344	338	566	285	281
1990	3,426	1,736	1,690	654	329	324	533	268	265
1991	3,240	1,643	1,598	636	321	315	514	258	255
1992	3,168	1,609	1,559	621	314	307	496	250	246
1993	3,247	1,648	1,599	633	320	313	506	255	252
1994	3,199	1,626	1,573	620	314	306	495	250	246
1995	3,262	1,657	1,604	623	315	308	489	247	242
1996	3,359	1,70[illegible]	1,652	639	323	315	499	252	247
1997	3,491	1,774	1,717	660	334	326	517	261	256
1998	3,652	1,856	1,796	681	345	336	533	269	264
1999	3,806	1,934	1,872	701	355	346	548	277	271
2000	3,911	1,987	1,923	717	363	354	560	283	277

a Total population, including armed forces overseas as of July 1.

b Source does not estimate population for "Negro" or "Black," only for "Nonwhite."

c Series II projections use a fertility assumption of 2.1 lifetime births per woman. It should be remembered that this affects only the last years of the century for this age cohort. Projections do not reflect results of the 1980 Census.

Source: "Latest Projections of 1995 Labor Force," Monthly Labor Review, November 1985

TABLE 4-3

CIVILIAN LABOR FORCE AND PARTICIPATION RATES BY SEX, AGE AND RACE, 1975 AND 1984, PROJECTED TO 1995

Group	Participation rate			Labor force (thousands)		
	Actual		Projected	Actual		Projected
	1975	1984	1995	1975	1984	1995
Total, 16 years and over	61.2	64.4	68.6	93,775	113,544	129,188
Men	77.9	76.4	75.3	56,298	63,835	69,262
16 to 19	59.1	56.0	57.9	4,805	4,134	3,758
20 to 24	84.5	85.0	87.3	7,585	8,594	8,780
25 to 34	95.3	94.4	93.7	14,192	18,488	18,247
35 to 44	95.6	95.4	94.3	10,388	14,027	18,232
45 to 54	92.1	91.2	90.4	10,401	9,776	13,721
55 to 64	75.6	68.5	62.6	7,023	7,056	6,119
65 and over	21.6	16.3	11.0	1,914	1,756	1,423
Women	46.3	53.6	58.9	37,475	49,704	59,886
16 to 19	49.1	51.8	51.2	4,065	3,809	3,307
20 to 24	64.1	70.4	76.3	6,185	7,451	6,316
25 to 34	54.9	69.8	81.1	8,673	14,234	16,168
35 to 44	55.8	70.1	80.5	6,505	10,886	16,943
45 to 54	54.6	62.9	71.3	6,683	7,230	11,400
55 to 64	40.9	41.7	42.7	4,323	4,911	4,695
65 and over	8.2	7.5	5.5	1,042	1,173	1,049
White	61.5	64.6	66.8	82,831	98,492	110,086
Men	78.7	77.1	75.8	50,324	56,062	59,894
16 to 24	74.4	75.0	77.0	10,931	10,977	9,051
25 to 54	95.1	94.8	94.0	31,225	37,067	44,062
55 and over	49.7	42.2	33.3	8,167	8,018	6,781
Women	45.9	53.3	58.4	32,508	42,431	50,192
16 to 24	58.0	65.5	68.3	8,998	9,706	8,175
25 to 54	54.3	68.0	78.0	18,732	27,378	37,080
55 and over	22.7	21.8	18.7	4,788	5,346	4,927
Black	58.8	62.2	65.8	9,263	12,033	14,796
Men	71.0	70.8	69.1	5,016	6,126	7,215
16 to 24	80.3	82.3	83.4	1,237	1,482	1,146
25 to 54	88.6	88.1	86.2	3,108	4,041	5,528
55 and over	44.7	36.2	29.5	670	623	541
Women	48.9	55.2	62.7	4,247	5,907	7,581
16 to 24	45.5	49.7	50.9	1,078	1,291	1,140
25 to 54	60.9	70.6	82.2	2,651	3,994	5,791
55 and over	26.2	25.4	23.4	517	621	650

SOURCE: Bureau of Labor Statistics

TABLE 4-4

PROFESSIONAL OCCUPATIONS OF EMPLOYED PERSONS AGE 45-60 WITH SOME COLLEGE BY YEARS OF COLLEGE COMPLETED AND SEX, 1985

(numbers in thousands)

MEN	1 TO 3 YEARS OF COLLEGE				4 YEARS OF COLLEGE OR MORE				MEDIAN SCHOOL YEARS COMPLETED
	TOTAL	1 YEAR	2 YEARS	3 YEARS	TOTAL	4 YEARS	5 YEARS	6 YEARS OR MORE	
TOTAL	2216	745	1107	363	3995	2017	363	1615	12.7
MANAGERIAL & PROFESSIONAL SPECIALTY	697	199	336	162	2854	1180	278	1396	16.4
EXECUTIVE, ADMINISTR., & MANAGERIAL	484	142	229	113	1287	731	110	447	15.0
OFFICIALS & ADMINISTRATORS, PUBLIC	19	4	12	3	61	30	7	24	15.9
OTHER EXECUTIVE, ADMIN. & MANAGER.	355	101	174	81	932	508	81	344	14.6
MANAGEMENT RELATED OCCUPATIONS	110	38	44	28	294	194	22	79	16.1
PROFESSIONAL SPECIALTY OCCUPATIONS.	213	57	107	49	1566	449	168	949	17.7
ENGINEERS	82	22	39	21	315	176	43	96	16.4
MATHEMATICAL & COMPUTER SCIENTISTS	14	4	8	2	38	21	4	13	16.0
NATURAL SCIENTISTS	5	0	4	1	82	38	10	34	16.8
HEALTH DIAGNOSING OCCUPATIONS	0	0	0	0	233	4	3	226	18+
HEALTH ASSESSMENT AND TREATING	7	1	4	2	51	31	5	15	16.6
TEACHERS, COLLEGE AND UNIVERSITY	6	0	3	3	181	7	17	157	18+
TEACHERS, EXCEPT COLLEGE AND UNIV.	20	5	12	4	240	55	46	139	18+
LAWYERS AND JUDGES	5	0	1	4	146	1	3	142	18+
OTHER PROFESSIONAL SPECIALTY	73	25	37	11	281	116	38	127	16.6
TECHNICAL, SALES, & ADMIN. SUPPORT	699	239	346	114	776	563	62	151	12.9
TECHNICIANS AND RELATED SUPPORT	104	37	51	16	100	60	6	34	13.8
HEALTH TECHNOLOGISTS & TECHNICIANS	8	0	7	1	12	5	0	7	14.1
ENGINEERING & SCIENCE TECHNICIANS.	64	28	29	7	24	17	1	6	13.0
TECH., EXC. HEALTH, ENGIN. & SCI	32	9	15	8	64	38	5	21	15.7
SALES OCCUPATIONS	395	131	190	74	544	400	48	96	13.1
SUPERVISORS AND PROPRIETORS.	135	49	58	27	185	133	21	31	12.8
SALES REPRES., FINANCE & BUS. SERV	99	29	51	19	193	133	16	44	15.8
SALES REP., COMMODIT., EXC. RETAIL	76	24	40	12	122	102	8	12	14.0
SALES WORKERS, RETAIL & PERSONAL	83	27	41	16	43	30	3	10	12.7
SALES RELATED OCCUPATIONS.	2	2	0	0	2	2	0	0	14.3
ADMIN. SUPPORT, INCLUDING CLERICAL.	200	71	105	24	132	103	8	21	12.7
SUPERVISORS.	28	8	14	6	27	26	0	0	12.7
COMPUTER EQUIPMENT OPERATORS	13	3	8	2	6	3	3	0	12.8
SECRETARIES, STENOGRAPH., & TYPIST	6	2	2	3	7	5	0	2	12.9
FINANCIAL RECORDS PROCESSING	24	7	13	5	8	5	1	2	12.9
MAIL AND MESSAGE DISTRIBUTING.	30	15	14	1	8	6	0	2	12.6
OTHER ADMINISTRATIVE SUPPORT	98	36	55	7	76	58	4	14	12.7

WOMEN	1 TO 3 YEARS OF COLLEGE				4 YEARS OF COLLEGE OR MORE				MEDIAN SCHOOL YEARS COMPLETED
	TOTAL	1 YEAR	2 YEARS	3 YEARS	TOTAL	4 YEARS	5 YEARS	6 YEARS OR MORE	
TOTAL	1852	670	902	280	1912	1041	277	595	12.6
MANAGERIAL & PROFESSIONAL SPECIALTY	528	143	256	129	1387	630	234	523	15 8
EXECUTIVE, ADMINISTR., & MANAGERIAL	267	96	132	39	300	185	26	88	12.9
OFFICIALS & ADMINISTRATORS, PUBLIC	11	4	4	2	9	5	0	4	12.8
OTHER EXECUTIVE, ADMIN. & MANAGER.	177	70	78	29	209	118	20	71	13.0
MANAGEMENT RELATED OCCUPATIONS	80	22	50	8	81	62	6	13	12.9
PROFESSIONAL SPECIALTY OCCUPATIONS.	261	47	124	90	1087	445	208	435	16.6
ENGINEERS	3	2	1	0	7	5	2	1	13.5
MATHEMATICAL & COMPUTER SCIENTISTS	4	0	4	0	9	5	2	2	14.7
NATURAL SCIENTISTS	0	0	0	0	6	3	1	3	17.7
HEALTH DIAGNOSING OCCUPATIONS.	2	0	2	0	16	3	1	12	18+
HEALTH ASSESSMENT AND TREATING	152	11	64	77	124	81	24	19	15.2
TEACHERS, COLLEGE AND UNIVERSITY	4	0	2	2	81	6	14	61	18+
TEACHERS, EXCEPT COLLEGE AND UNIV.	37	14	19	3	617	261	127	229	17.0
LAWYERS AND JUDGES	0	0	0	0	10	0	0	10	18+
OTHER PROFESSIONAL SPECIALTY	60	20	31	8	217	82	37	99	16.4
TECHNICAL, SALES, & ADMIN. SUPPORT	1098	430	549	119	445	347	37	61	12.7
TECHNICIANS AND RELATED SUPPORT	64	24	34	6	50	40	5	4	12.9
HEALTH TECHNOLOGISTS & TECHNICIANS	39	10	25	4	23	18	5	0	12.8
ENGINEERING & SCIENCE TECHNICIANS.	6	2	4	0	13	11	0	3	12.8
TECH., EXC. HEALTH, ENGIN. & SCI	19	12	5	2	13	11	0	2	13.8
SALES OCCUPATIONS	258	95	131	32	140	104	7	30	12.6
SUPERVISORS AND PROPRIETORS.	64	28	26	9	29	22	0	7	12.7
SALES REPRES., FINANCE & BUS. SERV	82	22	53	6	54	39	1	15	13.7
SALES REP., COMMODIT., EXC. RETAIL	11	5	2	4	6	4	1	1	12.9
SALES WORKERS, RETAIL & PERSONAL	98	39	46	13	49	38	4	7	12.5
SALES RELATED OCCUPATIONS.	4	1	3	0	2	2	0	0	14.4
ADMIN. SUPPORT, INCLUDING CLERICAL.	776	311	384	81	255	203	25	27	12.7
SUPERVISORS.	30	14	11	4	12	8	2	2	12.8
COMPUTER EQUIPMENT OPERATORS	19	4	10	4	6	4	0	2	12.7
SECRETARIES, STENOGRAPH., & TYPIST	295	118	156	20	88	72	10	7	12.7
FINANCIAL RECORDS PROCESSING	162	63	86	13	56	48	5	2	12.7
MAIL AND MESSAGE DISTRIBUTING.	6	2	1	3	4	4	0	0	12.6
OTHER ADMINISTRATIVE SUPPORT	265	110	119	35	89	66	8	15	12.6

SOURCE: Bureau of Labor Statistics

TABLE 4-5

PROFESSIONAL OCCUPATIONS OF EMPLOYED PERSONS AGE 25-44 WITH SOME COLLEGE BY YEARS OF COLLEGE COMPLETED AND SEX, 1985

(numbers in thousands)

MEN	1 TO 3 YEARS OF COLLEGE				4 YEARS OF COLLEGE OR MORE				MEDIAN SCHOOL YEARS COMPLETED
	TOTAL	1 YEAR	2 YEARS	3 YEARS	TOTAL	4 YEARS	5 YEARS	6 YEARS OR MORE	
TOTAL	6474	2142	3197	1134	9120	5077	1042	3000	13.1
MANAGERIAL & PROFESSIONAL SPECIALTY	1438	342	737	359	5800	2607	717	2476	16.6
EXECUTIVE, ADMINISTR., & MANAGERIAL	930	245	451	234	2427	1468	261	698	16.2
OFFICIALS & ADMINISTRATORS, PUBLIC	23	7	6	10	87	34	9	44	16.6
OTHER EXECUTIVE, ADMIN. & MANAGER.	695	174	354	166	1606	966	164	476	16.0
MANAGEMENT RELATED OCCUPATIONS	213	64	91	58	734	469	88	177	16.4
PROFESSIONAL SPECIALTY OCCUPATIONS.	507	98	285	124	3373	1139	456	1778	17.3
ENGINEERS	159	37	87	36	646	379	100	167	16.5
MATHEMATICAL & COMPUTER SCIENTISTS	58	6	44	9	169	76	28	65	16.6
NATURAL SCIENTISTS	22	0	18	4	166	56	30	80	17.5
HEALTH DIAGNOSING OCCUPATIONS	0	0	0	0	369	22	7	339	18+
HEALTH ASSESSMENT AND TREATING	43	2	22	19	154	58	45	51	16.8
TEACHERS, COLLEGE AND UNIVERSITY	2	0	1	0	226	24	31	170	18+
TEACHERS, EXCEPT COLLEGE AND UNIV.	27	7	15	6	583	218	116	249	17.4
LAWYERS AND JUDGES	5	2	4	0	355	8	10	336	18+
OTHER PROFESSIONAL SPECIALTY	191	45	95	51	705	296	88	321	16.6
TECHNICAL, SALES, & ADMIN. SUPPORT	1823	538	937	347	2111	1512	228	371	14.4
TECHNICIANS AND RELATED SUPPORT	372	91	214	67	421	269	58	93	14.8
HEALTH TECHNOLOGISTS & TECHNICIANS	45	8	25	12	40	23	6	12	15.1
ENGINEERING & SCIENCE TECHNICIANS.	211	52	129	30	123	94	10	19	14.2
TECH., EXC. HEALTH, ENGIN. & SCI	116	31	60	24	258	153	43	62	16.3
SALES OCCUPATIONS	936	281	458	197	1246	931	121	194	14.5
SUPERVISORS AND PROPRIETORS	317	106	166	44	370	268	44	58	14.0
SALES REPRES., FINANCE & BUS. SERV	217	66	90	61	384	265	28	90	16.1
SALES REP., COMMODIT., EXC. RETAIL	186	49	93	43	343	285	29	29	15.6
SALES WORKERS, RETAIL & PERSONAL	214	58	108	48	147	111	19	17	13.2
SALES RELATED OCCUPATIONS	2	2	0	0	2	2	0	0	13.6
ADMIN. SUPPORT, INCLUDING CLERICAL.	515	166	265	84	444	311	50	83	13.6
SUPERVISORS	52	21	22	8	70	38	8	23	14.1
COMPUTER EQUIPMENT OPERATORS	65	18	40	7	46	31	8	7	14.4
SECRETARIES, STENOGRAPH., & TYPIST	22	5	15	2	27	19	5	2	14.8
FINANCIAL RECORDS PROCESSING	38	16	17	6	40	33	0	7	14.3
MAIL AND MESSAGE DISTRIBUTING	89	26	48	16	38	28	6	4	12.9
OTHER ADMINISTRATIVE SUPPORT	249	82	123	45	224	162	23	40	13.2

WOMEN	1 TO 3 YEARS OF COLLEGE				4 YEARS OF COLLEGE OR MORE				MEDIAN SCHOOL YEARS COMPLETED
	TOTAL	1 YEAR	2 YEARS	3 YEARS	TOTAL	4 YEARS	5 YEARS	6 YEARS OR MORE	
TOTAL	5477	2084	2556	837	6425	3909	876	1639	13.0
MANAGERIAL & PROFESSIONAL SPECIALTY	1456	376	729	352	4367	2292	686	1389	16.4
EXECUTIVE, ADMINISTR., & MANAGERIAL	698	223	367	109	1065	700	119	245	14.7
OFFICIALS & ADMINISTRATORS, PUBLIC	26	4	14	9	45	21	9	16	14.9
OTHER EXECUTIVE, ADMIN. & MANAGER.	407	138	201	67	578	351	71	156	14.6
MANAGEMENT RELATED OCCUPATIONS	266	80	152	33	441	328	40	73	14.7
PROFESSIONAL SPECIALTY OCCUPATIONS.	758	153	362	243	3302	1592	566	1144	16.7
ENGINEERS	15	6	5	4	51	28	10	13	16.5
MATHEMATICAL & COMPUTER SCIENTISTS	22	6	13	2	58	37	8	13	16.3
NATURAL SCIENTISTS	8	3	5	0	46	18	7	21	17.0
HEALTH DIAGNOSING OCCUPATIONS	3	0	0	3	86	5	1	81	18+
HEALTH ASSESSMENT AND TREATING	430	41	207	181	602	394	92	116	16.1
TEACHERS, COLLEGE AND UNIVERSITY	12	4	7	1	140	36	25	78	18+
TEACHERS, EXCEPT COLLEGE AND UNIV.	113	31	60	22	1565	738	336	490	16.9
LAWYERS AND JUDGES	6	0	3	4	116	8	5	103	18+
OTHER PROFESSIONAL SPECIALTY	149	62	61	26	640	329	82	229	16.5
TECHNICAL, SALES, & ADMIN. SUPPORT	3109	1263	1465	381	1709	1339	159	211	12.9
TECHNICIANS AND RELATED SUPPORT	367	128	194	45	295	213	28	53	14.2
HEALTH TECHNOLOGISTS & TECHNICIANS	244	92	128	24	138	112	12	14	13.8
ENGINEERING & SCIENCE TECHNICIANS.	53	16	27	9	39	25	3	12	14.1
TECH., EXC. HEALTH, ENGIN. & SCI	70	20	39	11	117	76	13	28	16.0
SALES OCCUPATIONS	623	236	289	97	524	407	48	69	12.9
SUPERVISORS AND PROPRIETORS	140	59	50	31	115	92	10	14	12.9
SALES REPRES., FINANCE & BUS. SERV	158	57	78	22	183	132	13	37	14.3
SALES REP., COMMODIT., EXC. RETAIL	34	13	17	4	75	67	4	4	14.9
SALES WORKERS, RETAIL & PERSONAL	286	107	141	38	136	103	20	14	12.7
SALES RELATED OCCUPATIONS	5	0	3	2	15	13	2	0	16.0
ADMIN. SUPPORT, INCLUDING CLERICAL.	2119	898	982	239	891	719	83	89	12.8
SUPERVISORS	47	17	25	5	54	41	5	8	12.9
COMPUTER EQUIPMENT OPERATORS	100	44	47	9	41	36	4	1	13.6
SECRETARIES, STENOGRAPH., & TYPIST	789	320	382	88	268	225	26	18	12.8
FINANCIAL RECORDS PROCESSING	350	166	148	37	129	109	11	9	12.9
MAIL AND MESSAGE DISTRIBUTING	58	29	21	8	21	14	3	4	12.8
OTHER ADMINISTRATIVE SUPPORT	774	322	360	92	378	295	34	49	12.8

SOURCE: Bureau of Labor Statistics

TABLE 4-6

LABOR FORCE STATUS OF PERSONS 25 TO 64 YEARS OLD BY YEARS OF HIGHER EDUCATION COMPLETED, SEX AND ETHNICITY, 1984 AND 1985
(Numbers in thousands)

LABOR FORCE - STATUS AND YEARS OF HIGHER EDUCATION COMPLETED	TOTAL		MEN		WOMEN		WHITE		BLACK		HISPANIC	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
Civilian Institution Population												
College: 1-3 Years	19,636	20,600	9,538	9,980	10,100	10,620	17,303	18,035	1,865	2,053	815	893
4 Years or More	24,232	25,063	13,865	14,196	10,368	10,867	21,825	22,367	1,395	1,530	559	675
Civilian Labor Force												
College: 1-3 Years	15,812	16,802	8,761	9,102	7,050	7,700	13,840	14,630	1,601	1,757	678	739
4 Years or More	21,223	21,981	13,136	13,435	8,086	8,546	19,105	19,607	1,266	1,376	474	587
Labor Force Participation Rate												
College: 1-3 Years	80.5	81.6	91.9	91.2	69.8	72.5	80.0	81.1	85.8	85.6	83.2	82.6
4 Years or More	87.6	87.7	94.6	94.6	78.0	78.6	87.5	87.7	90.8	89.9	84.8	87.0
Employed												
College: 1-3 Years	14,980	16,019	8,302	8,689	6,678	7,328	13,201	14,065	1,446	1,571	638	696
4 Years or More	20,655	21,452	12,787	13,115	7,868	8,337	18,642	19,189	1,186	1,302	459	567
Unemployed												
College: 1-3 Years	831	784	458	413	372	371	640	565	155	187	40	43
4 Years or More	568	529	350	319	218	210	463	419	79	74	14	19
Unemployment Rate												
College: 1-3 Years	5.3	4.7	5.2	4.5	5.3	4.8	4.6	3.9	9.7	10.6	5.9	5.8
4 Years or More	2.7	2.4	2.7	2.4	2.7	2.5	2.4	2.1	6.2	5.4	3.0	3.2

SOURCE: Current Population Survey, Bureau of Labor Statistics, Unpublished, 1986

TABLE 4-7

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX, RACE AND HISPANIC ORIGIN, ANNUAL AVERAGES, 1985

(Numbers In Thousands)

	EMPLOYED												% OF TOTAL EMPLOYED		
	TOTAL			WHITE			BLACK			HISPANIC			TOTAL	TOTAL	TOTAL
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	FEMALE	BLACK	HISPANIC
TOTAL, 16 YEARS AND OVER	107150	59891	47259	93736	53046	40690	10581	5270	5231	6664	4081	2582	44.1	9.8	6.2
MANAGERIAL & PROFESSIONAL SPECIALTY OCCUPATIONS	25851	14802	11049	23561	13686	9875	1514	651	863	843	495	348	42.7	5.9	3.3
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL	12221	7870	4351	11256	7330	3927	649	348	301	420	277	152	35.6	5.3	3.5
LEGISLATIVE,CHIEF EXECS, & GENERAL ADMIN,PUB ADMIN.	26	17	9	21	14	6	3	2	1	1	1	0	34.7	11.6	4.0
OFFICIALS & ADMINISTRATORS, PUBLIC ADMINISTRATION	462	274	188	410	248	162	40	18	22	15	9	6	40.7	8.7	3.3
ADMINISTRATORS, PROTECTIVE SERVICES	39	32	7	35	29	6	2	2	1	1	1	0	18.0	5.5	2.9
FINANCIAL MANAGERS	394	253	141	370	238	132	12	6	6	12	7	5	35.7	3.1	3.1
PERSONNEL & LABOR RELATIONS MANAGERS	110	61	49	103	57	45	6	3	3	4	3	1	44.5	5.6	3.5
PURCHASING MANAGERS	99	75	24	94	71	22	4	3	1	3	2	1	24.4	4.8	2.7
MANAGERS, MARKETING, ADVERTISING, & PUB RELATIONS	419	319	100	400	307	94	16	11	5	11	8	2	23.8	3.9	2.5
ADMINISTRATORS, EDUCATION & RELATED FIELDS	480	249	231	427	221	207	45	23	22	12	6	6	48.2	9.4	2.6
MANAGERS, MEDICINE & HEALTH	106	43	63	93	39	54	9	2	6	5	3	2	59.2	8.1	4.6
MANAGERS, PROPERTIES & REAL ESTATE	342	202	140	319	186	133	18	13	5	20	15	5	41.0	5.1	5.9
POSTMASTERS & MAIL SUPERINTENDENTS	36	21	15	33	18	14	2	2	0	0	0	0	41.4	6.3	0.8
FUNERAL DIRECTORS	39	35	4	35	31	4	4	4	0	0	0	0	10.0	10.6	0.0
MANAGERS & ADMINISTRATORS, N.E.C.	6353	4489	1864	5927	4214	1713	271	171	100	213	157	56	29.3	4.3	3.4
MANAGEMENT-RELATED OCCUPATIONS	3318	1800	1517	2990	1656	1334	216	88	128	131	65	66	45.7	6.5	4.0
ACCOUNTANTS & AUDITORS	1263	705	557	1125	645	480	74	26	48	52	31	22	44.1	5.9	4.2
UNDERWRITERS & OTHER FINANCIAL OFFICERS	621	323	298	568	302	266	37	15	22	23	10	14	48.0	5.9	3.8
MANAGEMENT ANALYSTS	158	111	46	146	105	42	7	3	4	3	2	1	29.4	4.7	2.2
PERSONNEL,TRAINING, & LABOR RELATIONS SPECIALSTS.	343	149	194	297	129	168	40	18	22	18	6	13	56.5	11.6	5.3
PURCHASING AGENTS & BUYERS, FARM PRODUCTS	19	18	2	18	17	1	0	0	-0	0	0	-0	8.4	0.7	0.9
BUYERS, WHOLESALE & RETAIL TRADE, EX FARM PROD.	207	106	101	195	100	95	5	2	3	6	3	4	48.7	2.4	3.1
PURCHASING AGENTS & BUYERS, N.E.C.	212	128	83	194	119	75	14	7	6	5	2	3	39.3	6.5	2.2
BUSINESS & PROMOTION AGENTS	37	25	12	35	23	12	1	1	-0	1	0	0	33.5	2.9	1.4
CONSTRUCTION INSPECTORS	46	42	5	44	41	3	2	1	1	3	3	0	7.3	3.7	7.2
INSPECTORS & COMPLIANCE OFFICERS, EX CONSTRUCTION	164	126	38	141	113	28	21	12	10	9	7	2	22.9	13.1	5.2
MANAGEMENT RELATED OCCUPATIONS, N.E.C.	248	66	183	227	62	165	15	2	13	10	2	9	73.5	6.2	4.1
PROFESSIONAL SPECIALTY	13630	6932	6699	12305	6357	5948	865	303	562	415	218	197	49.1	6.3	3.0
ENGINEERS, ARCHITECTS, & SURVEYORS	1835	1707	128	1679	1567	112	48	41	7	50	47	3	7.0	2.6	2.8
ARCHITECTS	130	116	15	118	104	13	4	4	0	6	5	1	11.3	3.1	4.6
ENGINEERS	1683	1570	113	1539	1441	98	43	37	7	44	41	2	6.7	2.6	2.6
AEROSPACE ENGINEERS	95	91	4	90	86	4	1	1	0	7	6	0	4.7	1.3	6.9
METALLURGICAL & MATERIALS ENGINEERS	19	18	1	17	16	1	0	0	0	1	1	0	6.9	1.2	4.0
MINING ENGINEERS	9	9	0	9	9	0	0	0	0	0	0	0	3.8	0.0	0.8
PETROLEUM ENGINEERS	31	30	1	29	28	1	0	0	0	0	0	0	3.0	(Z)	1.4
CHEMICAL ENGINEERS	64	58	6	58	53	5	2	1	1	2	2	0	8.8	2.4	2.4
NUCLEAR ENGINEERS	12	12	0	11	10	0	0	0	0	0	0	0	2.8	0.0	2.9
CIVIL ENGINEERS	221	211	10	200	191	9	4	4	0	6	6	0	4.7	1.8	2.6
AGRICULTURAL ENGINEERS	4	4	0	3	3	0	0	0	0	0	0	0	5.6	0.0	4.7
ELECTRICAL & ELECTRONIC ENGINEERS	544	498	45	492	454	38	18	15	3	11	10	1	8.3	3.4	2.0
INDUSTRIAL ENGINEERS	178	159	19	166	149	16	5	3	2	6	5	1	10.9	2.9	3.1
MECHANICAL ENGINEERS	272	262	10	249	240	10	6	6	-0	6	6	0	3.7	2.2	2.1
MARINE ENGINEERS & NAVAL ARCHITECTS	17	17	1	15	15	1	0	0	0	-0	-0	0	4.5	2.2	(Z)
ENGINEERS, N.E.C.	217	203	14	200	187	13	6	6	0	6	6	0	6.3	3.0	2.7
SURVEYORS & MAPPING SCIENTISTS	22	22	0	21	21	0	0	0	0	1	1	0	1.3	0.7	4.1
MATHEMATICAL & COMPUTER SCIENTISTS	571	394	178	514	360	153	32	16	16	16	11	5	31.1	5.6	2.8
COMPUTER SYSTEMS ANALYSTS & SCIENTISTS	359	258	101	324	236	87	20	11	9	11	8	3	28.0	5.5	3.1
OPERATIONS & SYSTEMS RESEARCHERS & ANALYSTS	164	107	57	149	99	50	9	5	4	5	3	2	34.9	5.3	3.1
ACTUARIES	13	10	3	11	9	2	1	0	1	0	0	0	23.6	8.4	(Z)
STATISTICIANS	30	14	16	24	11	13	3	1	2	-0	0	-0	53.6	0.7	(Z)
MATHEMATICAL SCIENTISTS, N.E.C.	6	5	1	6	5	1	0	0	0	0	0	0	17.1	0.0	(Z)
NATURAL SCIENTISTS	376	298	78	344	276	68	11	7	3	9	7	3	20.8	2.9	2.4
PHYSICISTS & ASTRONOMERS	27	25	2	25	23	2	0	0	0	0	0	0	7.8	0.8	0.2
CHEMISTS, EXCEPT BIOCHEMISTS	111	87	23	94	77	17	6	4	2	4	3	1	21.0	5.6	3.6
ATMOSPHERIC & SPACE SCIENTISTS	11	10	1	9	8	1	1	0	0	0	0	0	9.0	4.6	4.0
GEOLOGISTS & GEODESISTS	58	49	9	57	49	8	0	-0	0	1	1	0	14.8	0.5	2.2
PHYSICAL SCIENTISTS, N.E.C.	14	12	3	14	12	2	0	-0	0	0	0	0	18.8	1.5	0.0
AGRICULTURAL & FOOD SCIENTISTS	22	16	6	21	16	6	0	0	-0	1	1	-0	26.3	0.8	4.3
BIOLOGICAL & LIFE SCIENTISTS	44	43	21	59	38	21	1	1	0	2	1	1	33.3	1.6	2.7
FORESTRY & CONSERVATION SCIENTISTS	37	34	3	35	32	3	1	1	0	0	0	0	8.5	3.1	0.1
MEDICAL SCIENTISTS	33	22	10	29	20	9	1	0	1	1	-0	1	31.8	3.9	2.2
HEALTH DIAGNOSING OCCUPATIONS	728	620	108	650	566	84	23	17	7	23	19	4	14.8	3.2	3.1
PHYSICIANS	492	407	85	425	360	65	18	14	5	19	16	3	17.2	3.7	3.9
DENTISTS	131	123	9	125	119	6	3	2	2	3	2	0	6.5	2.6	2.1
VETERINARIANS	36	30	6	35	29	6	0	0	0	0	0	0	16.8	0.8	1.3
OPTOMETRISTS	29	26	3	28	25	3	0	0	-0	0	0	0	10.8	0.1	0.8
PODIATRISTS	8	7	1	8	7	0	0	0	0	0	0	0	9.5	5.8	1.5
HEALTH DIAGNOSING PRACTITIONERS, N.E.C.	31	27	4	30	25	4	1	1	0	0	0	0	13.6	4.8	(Z)
HEALTH ASSESSMENT & TREATING OCCUPATIONS	2006	289	1717	1789	265	1523	141	16	125	48	14	34	85.6	7.8	2.4
REGISTERED NURSES	1447	71	1376	1287	66	1221	99	3	95	30	4	26	95.1	6.8	2.1
PHARMACISTS	172	121	51	162	117	46	6	2	4	3	2	2	29.8	3.2	2.0
DIETICIANS	81	5	76	62	3	59	16	2	14	3	0	2	93.9	19.3	3.4
THERAPISTS	257	61	196	230	50	181	19	8	10	11	7	3	76.2	7.2	4.2
INHALATION THERAPISTS	70	25	45	59	20	40	9	4	5	3	3	1	64.3	12.9	4.6
OCCUPATIONAL THERAPISTS	26	3	24	25	2	22	0	0	0	2	1	1	89.1	1.6	5.7
PHYSICAL THERAPISTS	60	17	44	55	14	40	2	1	1	4	3	1	72.5	3.7	6.7
SPEECH THERAPISTS	58	4	55	54	3	52	1	0	1	0	0	0	93.8	2.3	0.7
THERAPISTS, N.E.C.	42	13	29	36	10	26	3	1	2	2	0	1	68.5	13.2	3.7
PHYSICIANS ASSISTANTS	50	31	19	47	30	17	2	1	1	1	1	0	37.3	4.2	2.2

SOURCE: Current Population Survey, Bureau of Labor Statistics, Unpublished, 1986

TABLE 4-7 Continued

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX, RACE AND HISPANIC ORIGIN, ANNUAL AVERAGES, 1985

(Numbers In Thousands)

	EMPLOYED												% OF TOTAL EMPLOYED		
	TOTAL			WHITE			BLACK			HISPANIC			TOTAL	TOTAL	TOTAL
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	FEMALE	BLACK	HISPANIC
TEACHERS, COLLEGE & UNIVERSITY	843	417	426	587	379	208	25	13	12	19	11	8	35.2	3.9	3.0
EARTH, ENVIRONMENTAL, & MARINE SCIENCE TEACHERS	5	4	0	5	4	0	0	0	0	0	0	0	10.4	0.0	0.0
BIOLOGICAL SCIENCE TEACHERS	26	20	6	25	19	6	0	0	0	0	0	0	23.6	0.1	0.9
CHEMISTRY TEACHERS	18	14	4	16	12	4	1	1	0	1	1	1	22.1	2.9	6.7
PHYSICS TEACHERS	13	12	0	11	11	0	1	1	0	0	0	0	3.0	5.4	3.1
NATURAL SCIENCE TEACHERS, N.E.C.	1	1	0	1	1	0	0	0	0	0	0	0	30.2	0.0	0.0
PSYCHOLOGY TEACHERS	19	12	6	18	12	6	0	0	0	-0	0	-0	33.4	2.3	(Z)
ECONOMICS TEACHERS	14	11	2	13	11	2	0	0	-0	1	1	0	17.2	2.0	5.1
HISTORY TEACHERS	17	14	3	15	12	3	1	1	0	0	0	0	19.7	0.9	2.7
POLITICAL SCIENCE TEACHERS	9	8	1	9	8	1	0	0	0	1	0	1	12.6	4.4	6.9
SOCIOLOGY TEACHERS	8	6	2	6	4	2	1	1	0	0	0	0	27.0	11.2	3.6
SOCIAL SCIENCE TEACHERS, N.E.C.	5	3	2	5	3	2	0	0	0	0	0	0	39.4	4.2	0.0
ENGINEERING TEACHERS	21	18	3	18	15	3	0	0	0	0	0	0	14.3	1.1	0.0
MATHEMATICAL SCIENCE TEACHERS	58	36	14	45	33	12	2	1	1	2	2	1	27.2	4.7	4.5
COMPUTER SCIENCE TEACHERS	15	10	6	14	9	5	0	0	0	0	0	0	36.8	2.1	0.4
MEDICAL SCIENCE TEACHERS	14	11	4	12	10	3	1	0	0	1	1	0	25.0	5.7	0.5
HEALTH SPECIALTIES TEACHERS	41	11	30	37	10	28	3	1	2	1	0	1	73.2	5.8	2.6
BUSINESS, COMMERCE, & MARKETING TEACHERS	20	14	6	19	13	6	0	0	0	0	0	0	29.7	0.4	0.9
AGRICULTURE & FORESTRY TEACHERS	6	6	0	6	5	0	0	0	0	0	0	0	7.6	0.0	0.0
ART, DRAMA, & MUSIC TEACHERS	41	26	15	40	26	14	0	0	0	1	1	0	35.8	1.0	2.0
PHYSICAL EDUCATION TEACHERS	14	8	6	13	7	6	1	1	0	0	0	0	43.6	7.1	0.5
EDUCATION TEACHERS	12	7	4	11	7	4	0	0	0	-0	-0	0	36.2	2.9	(Z)
ENGLISH TEACHERS	47	23	24	45	23	22	3	0	3	1	0	1	51.2	5.7	2.7
FOREIGN LANGUAGE TEACHERS	24	12	12	23	11	12	0	0	0	4	2	2	49.7	1.2	17.7
LAW TEACHERS	6	6	1	6	5	1	0	0	0	0	0	0	12.2	3.6	0.0
SOCIAL WORK TEACHERS	1	0	1	0	0	0	0	0	0	0	0	0	70.6	43.6	0.0
THEOLOGY TEACHERS	9	6	3	9	6	3	0	0	0	-0	0	-0	33.0	0.7	-0.3
TRADE & INDUSTRIAL TEACHERS	3	3	0	3	3	0	0	0	0	0	0	0	11.2	0.0	2.5
HOME ECONOMICS TEACHERS	2	0	2	2	0	2	0	-0	0	0	0	0	82.0	4.7	5.8
TEACHERS, COLLEGE & UNIVERSITY, N.E.C.	5	3	2	5	3	2	0	0	0	-0	-0	0	44.7	4.9	(Z)
COLLEGE & UNIVERSITY TEACHERS, SUBJECT NOT SPEC	175	110	65	156	97	59	8	4	4	4	3	1	37.1	4.3	2.2
TEACHERS, EXCEPT COLLEGE & UNIVERSITY	3523	950	2573	3142	870	2272	323	61	262	111	33	78	73.0	9.2	3.1
PREKINDERGARTEN & KINDERGARTEN TEACHERS	329	4	325	286	3	283	39	1	38	18	0	17	98.8	11.9	5.4
ELEMENTARY SCHOOL TEACHERS	1360	218	1142	1187	199	988	151	16	136	37	8	29	84.0	11.1	2.7
SECONDARY SCHOOL TEACHERS	1175	540	635	1070	497	573	89	35	54	38	19	19	54.0	7.6	3.2
SPECIAL EDUCATION TEACHERS	206	31	175	182	28	154	20	2	18	4	1	3	85.0	9.9	2.1
TEACHERS, N.E.C.	454	157	296	417	143	274	24	8	16	14	5	9	65.3	5.3	3.1
COUNSELORS, EDUCATIONAL & VOCATIONAL	177	78	99	154	71	83	21	6	15	10	5	6	55.9	11.7	5.8
LIBRARIANS, ARCHIVISTS, & CURATORS	215	33	182	196	30	166	13	2	12	6	3	3	84.7	6.1	2.6
LIBRARIANS	201	26	175	182	24	158	13	2	12	6	3	3	87.0	6.6	2.8
ARCHIVISTS & CURATORS	14	7	7	14	6	7	0	0	0	0	0	0	52.0	0.4	0.2
SOCIAL SCIENTISTS & URBAN PLANNERS	286	164	122	265	151	113	15	9	6	9	4	5	42.6	5.2	3.1
ECONOMISTS	102	67	35	95	62	33	3	2	2	3	3	0	34.5	3.4	3.4
PSYCHOLOGISTS	150	75	76	139	69	70	10	5	5	5	1	4	50.4	6.6	3.4
SOCIOLOGISTS	2	1	0	2	1	0	0	0	0	0	0	0	23.2	0.0	0.0
SOCIAL SCIENTISTS, N.E.C.	16	9	6	15	9	6	1	0	0	-0	-0	0	41.2	3.5	(Z)
URBAN PLANNERS	16	12	4	15	11	4	1	1	-0	0	-0	0	25.3	6.2	2.0
SOCIAL, RECREATION, & RELIGIOUS WORKERS	873	475	398	747	416	332	110	49	61	41	23	19	45.6	12.6	4.7
SOCIAL WORKERS	438	146	292	355	120	235	77	23	54	25	11	14	66.7	17.6	5.6
RECREATION WORKERS	76	25	51	64	18	46	10	5	5	5	2	3	67.5	13.0	6.8
CLERGY	289	272	17	261	246	15	21	20	1	10	9	0	6.0	7.3	3.3
RELIGIOUS WORKERS, N.E.C.	70	33	37	67	31	36	2	2	0	2	1	1	53.0	3.0	2.8
LAWYERS & JUDGES	671	549	122	640	526	114	22	16	6	15	10	6	18.2	3.3	2.3
LAWYERS	642	525	116	614	504	110	19	14	6	15	10	5	18.1	3.0	2.3
JUDGES	29	24	6	26	22	4	3	2	1	1	0	1	19.0	9.5	2.5
WRITERS, ARTISTS, ENTERTAINERS, & ATHLETES	1725	957	768	1598	888	719	81	50	31	57	32	24	44.5	4.7	3.3
AUTHORS	70	36	33	66	34	32	2	1	1	1	1	1	48.0	2.3	2.1
TECHNICAL WRITERS	48	31	17	46	30	16	1	1	0	1	0	1	35.6	2.2	1.6
DESIGNERS	484	237	248	450	219	232	15	7	8	17	8	9	51.1	3.0	3.6
MUSICIANS & COMPOSERS	152	106	46	135	93	43	14	11	3	5	4	1	30.3	9.3	3.3
ACTORS & DIRECTORS	77	48	29	70	43	28	6	4	1	0	0	0	37.9	7.2	0.6
PAINTERS,SCULPTORS,CRAFT-ARTISTS,ART PRINTMAKERS	200	100	100	167	91	97	6	5	2	6	4	2	50.0	3.2	2.9
PHOTOGRAPHERS	129	93	35	120	86	34	7	5	1	4	3	1	27.3	5.2	3.1
DANCERS	15	5	10	14	4	9	0	0	0	1	0	0	68.5	2.4	4.4
ARTISTS, PERFORMERS, RELATED WORKERS, N.E.C.	62	27	35	53	24	30	3	1	2	7	2	5	56.2	4.9	10.9
EDITORS & REPORTERS	230	111	119	218	107	111	9	3	6	5	3	2	51.7	4.1	2.3
PUBLIC RELATIONS SPECIALISTS	143	73	70	131	67	64	11	6	5	4	3	1	48.7	7.4	3.1
ANNOUNCERS	51	38	13	47	36	11	3	2	1	2	2	0	24.9	6.7	3.0
ATHLETES	64	51	13	60	47	13	4	4	0	3	2	1	20.5	5.8	4.6
TECHNICAL, SALES, & ADMINISTRATIVE SUPPORT	33231	11725	21507	29553	10562	18990	2785	816	1969	1650	606	1044	64.7	8.4	5.0
TECHNICIANS & RELATED SUPPORT	3255	1719	1537	2823	1525	1298	291	112	179	130	70	61	47.2	8.9	4.0
HEALTH TECHNOLOGISTS & TECHNICIANS	1115	185	929	923	152	771	152	22	129	45	10	35	83.4	13.6	4.1
CLINICAL LABORATORY TECHNOLOGISTS & TECHNICIANS	295	72	223	246	57	188	32	10	22	15	6	8	75.5	11.0	4.9
DENTAL HYGIENISTS	56	0	56	54	0	54	1	0	1	1	0	1	99.5	2.0	2.0
HEALTH RECORD TECHNOLOGISTS & TECHNICIANS	52	4	48	38	3	36	10	1	9	1	0	1	93.1	10.7	1.8
RADIOLOGIC TECHNICIANS	121	32	89	108	26	81	9	3	6	3	1	3	73.8	7.5	2.7
LICENSED PRATICAL NURSES	402	12	390	313	9	304	79	2	76	18	0	18	96.9	19.6	4.5
HEALTH TECHNOLOGISTS & TECHNICIANS, N.E.C.	189	66	124	164	56	108	21	7	14	8	3	5	65.5	10.9	4.0
ENGINEERING & RELATED TECHNOLOGISTS & TECHNICIANS	904	741	163	801	659	141	58	46	12	44	34	10	18.1	6.4	4.9
ELECTRICAL & ELECTRONIC TECHNICIANS	304	264	40	258	225	32	28	23	4	15	12	3	13.1	9.1	5.0
INDUSTRIAL ENGINEERING TECHNICIANS	6	5	1	5	5	1	0	0	0	0	0	0	14.9	2.4	0.0
MECHANICAL ENGINEERING TECHNICIANS	14	12	2	12	11	1	1	0	0	1	0	0	12.6	3.7	5.1
ENGINEERING TECHNICIANS, N.E.C.	219	156	63	196	142	54	15	9	7	10	6	4	28.8	7.0	4.7
DRAFTING OCCUPATIONS	297	246	52	269	221	47	12	11	1	16	15	2	17.4	3.9	5.5
SURVEYING & MAPPING TECHNICIANS	64	58	6	60	54	6	3	3	0	1	1	0	9.8	4.7	2.3
SCIENCE TECHNICIANS	211	141	70	190	128	62	17	10	7	8	6	2	33.3	8.1	3.8
BIOLOGICAL TECHNICIANS	54	30	23	47	27	20	5	2	3	3	2	1	43.2	9.2	5.5
CHEMICAL TECHNICIANS	88	65	22	80	60	21	6	5	1	3	2	1	25.3	7.2	3.4
SCIENCE TECHNICIANS, N.E.C.	70	45	25	63	41	22	6	3	3	2	2	0	35.7	8.4	3.1
TECHNICIANS, EX HEALTH, ENGINEERING, & SCIENCE	1026	652	374	909	586	323	64	34	30	33	19	14	36.4	6.2	3.2
AIRPLANE PILOTS & NAVIGATORS	77	75	2	76	74	2	1	1	0	0	0	0	2.6	1.0	0.1
AIR TRAFFIC CONTROLLERS	34	28	5	29	26	4	3	2	1	1	1	0	15.7	9.1	2.8
BROADCAST EQUIPMENT OPERATORS	25	18	6	22	17	5	2	1	1	1	1	0	26.2	7.5	3.6
COMPUTER PROGRAMMERS	534	351	183	466	312	154	34	18	16	13	8	6	34.3	6.4	2.5
TOOL PROGRAMMERS, NUMERICAL CONTROL	4	3	0	4	3	0	-0	0	-0	1	1	0	6.3	(Z)	23.8
LEGAL ASSISTANTS	148	36	112	135	32	103	11	4	7	7	2	5	75.6	7.3	4.6
TECHNICIANS, N.E.C.	204	139	65	177	122	55	13	8	5	10	7	3	31.7	6.4	5.0

SOURCE: Current Population Survey, Bureau of Labor Statistics, Unpublished, 1986

TABLE 4-7 Continued

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX, RACE AND HISPANIC ORIGIN, ANNUAL AVERAGES, 1985

(Numbers In Thousands)

	EMPLOYED												% OF TOTAL EMPLOYED		
	TOTAL			WHITE			BLACK			HISPANIC			TOTAL	TOTAL	TOTAL
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	FEMALE	BLACK	HISPANIC
SALES OCCUPATIONS	12667	6579	6088	11469	6172	5496	696	262	434	556	291	265	48.1	5.5	4.4
SUPERVISORS & PROPRIETORS	3316	2282	1033	3099	2141	958	125	81	44	133	93	41	31.2	3.8	4.0
SALES REPRESENTATIVES, FINANCE & BUSINESS SERVICES	2099	1239	860	1987	1178	809	72	40	31	56	32	24	41.0	3.4	2.7
INSURANCE SALES	541	391	150	504	368	136	25	15	10	15	8	7	27.7	4.7	2.7
REAL ESTATE SALES	659	319	340	633	306	327	15	9	6	10	11	7	51.6	2.3	1.6
SECURITIES & FINANCIAL SERVICES SALES	266	201	65	254	193	61	6	4	2	3	1	2	24.4	2.2	1.2
ADVERTISING & RELATED SALES	148	72	76	138	68	70	8	3	5	4	3	1	51.5	5.7	2.7
SALES OCCUPATIONS, OTHER BUSINESS SERVICES	485	256	229	458	243	215	17	9	8	17	9	8	47.2	3.5	3.5
SALES REPS, COMMODITIES, EX RETAIL (INC SALES ENGR)	1509	1244	264	1457	1206	250	34	26	8	47	39	8	17.5	2.3	3.1
SALES WORKERS, RETAIL & PERSONAL SERVICES	5602	1791	3890	5065	1625	3440	464	114	350	318	127	191	68.5	8.2	5.6
SALES WORKERS, MOTOR VEHICLES & BOATS	275	254	21	260	240	20	12	11	1	13	13	0	7.7	4.2	4.8
SALES WORKERS, APPAREL	465	80	384	420	71	349	36	7	29	26	5	20	82.7	7.8	5.5
SALES WORKERS, SHOES	100	45	63	93	38	55	11	4	7	11	6	5	58.2	10.6	10.4
SALES WORKERS, FURNITURE & HOME FURNISHINGS	161	79	82	153	75	78	7	3	3	7	4	3	51.0	4.2	4.2
SALES WORKERS, RADIO, TELEVISION, HI-FI, APPLIANCES	170	122	48	159	114	45	7	5	3	7	5	2	28.3	4.4	4.2
SALES WORKERS, HARDWARE & BUILDING SUPPLIES	198	153	45	190	147	43	7	6	1	11	8	2	22.7	3.6	5.4
SALES WORKERS, PARTS	153	134	19	146	128	18	6	6	1	9	8	0	12.2	3.2	5.7
SALES WORKERS, OTHER COMMODITIES	1388	352	1036	1258	316	942	85	23	63	61	21	41	74.6	6.1	4.4
SALES COUNTER CLERKS	103	11	92	92	11	81	11	4	7	10	3	7	72.2	7.5	7.3
CASHIERS	2174	348	1886	1836	310	1526	263	38	225	138	37	101	83.1	12.1	6.4
STREET & DOOR-TO-DOOR SALES WORKERS	325	78	247	307	78	236	13	5	8	10	10	8	76.1	4.1	5.4
NEWS VENDORS	126	87	39	118	81	36	6	4	2	7	6	1	30.7	5.8	5.5
SALES-RELATED OCCUPATIONS	63	23	40	61	22	39	1	1	1	2	1	1	63.7	2.1	3.1
DEMONSTRATORS, PROMOTERS, & MODELS	37	8	29	35	7	28	1	1	1	2	0	1	78.6	3.5	4.2
AUCTIONEERS	7	6	1	7	6	1	0	0	0	0	0	0	12.5	0.0	0.0
SALES SUPPORT OCCUPATIONS, N.E.C.	18	8	10	18	8	10	0	0	0	0	0	0	53.7	0.0	2.3
ADMINISTRATIVE SUPPORT, INCLUDING CLERICAL	17309	3427	13882	15061	2864	12196	1798	442	1357	963	246	718	80.2	10.4	5.6
SUPERVISORS, ADMINISTRATIVE SUPPORT	712	332	380	605	281	325	88	40	48	52	14	38	53.4	12.3	4.5
SUPERVISORS, GENERAL OFFICE	421	151	270	357	126	230	52	19	34	17	6	11	64.1	12.5	4.1
SUPERVISORS, COMPUTER EQUIPMENT OPERATORS	45	29	16	39	25	14	4	2	2	2	1	1	35.9	9.5	5.0
SUPERVISORS, FINANCIAL RECORDS PROCESSING	87	24	63	79	24	54	5	1	4	4	1	3	69.8	6.1	4.4
CHIEF COMMUNICATIONS OPERATORS	4	2	2	3	1	2	0	0	0	0	0	0	51.1	13.2	0.0
SUPERVISORS, DISTRIBUTION, SCHED, ADJUSTING CLERKS	156	124	32	128	103	25	25	18	7	9	8	1	20.6	16.1	5.9
COMPUTER EQUIPMENT OPERATORS	779	262	518	647	215	433	105	36	69	46	18	28	66.4	13.5	5.9
COMPUTER OPERATORS	774	259	515	643	213	430	104	35	69	46	18	28	66.5	13.5	5.9
PERIPHERAL EQUIPMENT OPERATORS	6	3	3	4	2	2	1	1	0	0	0	0	59.8	20.9	2.7
SECRETARIES, STENOGRAPHERS, & TYPISTS	5002	114	4888	4486	97	4389	410	12	398	227	9	217	97.7	8.2	4.5
SECRETARIES	4059	66	3993	3726	59	3667	265	6	259	178	5	172	98.4	6.5	4.3
STENOGRAPHERS	62	9	53	57	5	48	4	0	3	1	0	1	85.9	6.6	1.8
TYPISTS	880	38	842	704	33	670	141	6	135	51	6	45	95.6	16.0	5.8
INFORMATION CLERKS	1257	125	1132	1113	108	1005	106	12	95	80	9	72	90.1	8.4	6.4
INTERVIEWERS	172	26	145	148	23	125	19	3	16	11	1	10	84.6	11.2	6.5
HOTEL CLERKS	71	19	52	62	17	45	5	1	4	4	1	2	72.7	7.5	5.1
TRANSPORTATION TICKET & RESERVATION AGENTS	106	35	71	85	30	55	13	4	10	5	2	3	67.8	12.7	4.9
RECEPTIONISTS	679	16	662	618	14	604	45	2	43	42	1	41	97.6	6.7	6.2
INFORMATION CLERKS, N.E.C.	229	27	202	200	25	176	23	2	21	18	3	14	88.1	10.0	7.7
RECORDS PROCESSING OCCUPATIONS, EXCEPT FINANCIAL	842	159	683	689	123	567	118	28	91	59	14	45	89.5	14.5	11.6
CLASSIFIED-AD CLERKS	9	1	8	8	1	7	1	0	1	1	0	1	88.1	9.5	(Z)
CORRESPONDENCE CLERKS	14	3	11	12	3	10	1	0	1	-0	0	-0	78.0	12.6	5.0
ORDER CLERKS	198	42	156	170	37	133	25	5	20	10	4	6	92.2	11.7	6.4
PERSONNEL CLERKS, EXCEPT PAYROLL & TIMEKEEPING	62	5	57	51	4	46	7	1	7	4	0	4	79.9	10.8	6.7
LIBRARY CLERKS	136	27	108	115	20	95	15	5	10	9	3	6	81.8	17.4	8.5
FILE CLERKS	290	55	235	224	38	186	51	13	38	25	5	20	88.4	13.8	7.4
RECORDS CLERKS	134	26	108	109	20	88	18	5	14	10	2	8	90.3	5.5	4.2
FINANCIAL RECORDS PROCESSING OCCUPATIONS	2503	242	2262	2304	208	2096	138	19	119	106	17	89	91.5	4.7	4.1
BOOKKEEPERS, ACCOUNTING, & AUDITING CLERKS	2037	173	1864	1895	147	1748	96	16	80	83	13	71	86.8	9.1	4.3
PAYROLL & TIMEKEEPING CLERKS	177	23	154	154	21	133	16	1	15	8	3	5	87.7	7.7	5.0
BILLING CLERKS	158	19	139	142	16	126	12	2	10	8	1	7	73.5	11.9	3.0
COST & RATE CLERKS	82	22	60	70	21	49	10	0	9	2	0	2	92.3	8.2	8.3
BILLING, POSTING, & CALCULATING MACHINE OPERATORS	49	4	45	43	4	39	4	-0	4	4	0	4	89.4	11.7	8.9
DUPLICATING, MAIL & OTHER OFFICE MACHINE OPERATORS	65	20	45	54	18	37	8	2	6	6	3	3	62.2	9.0	8.3
DUPLICATING MACHINE OPERATORS	24	9	15	19	8	11	2	1	1	2	1	1	64.3	11.4	25.6
MAIL PREPARING & PAPER HANDLING MACHINE OPERATORS	8	3	5	6	2	4	1	0	1	2	1	1	75.5	13.7	5.6
OFFICE MACHINE OPERATORS, N.E.C.	34	8	26	29	7	22	5	1	4	2	1	1			
COMMUNICATIONS EQUIPMENT OPERATORS	223	27	196	180	20	159	39	6	34	12	2	10	88.8	17.7	5.4
TELEPHONE OPERATORS	215	24	191	173	18	155	38	5	33	12	1	10	88.8	17.9	5.5
TELEGRAPHERS	5	2	3	4	2	2	1	0	1	0	0	-0	59.3	18.1	6.2
COMMUNICATIONS EQUIPMENT OPERATORS, N.E.C.	3	1	2	3	1	2	0	0	-0	0	0	0	73.4	4.2	1.6
MAIL & MESSAGE DISTRIBUTING OCCUPATIONS	805	532	273	622	422	200	160	95	64	43	31	13	33.9	19.8	5.4
POSTAL CLERKS, EXCEPT MAIL CARRIERS	258	151	107	178	115	63	67	30	37	13	8	4	41.4	26.1	5.0
MAIL CARRIERS, POSTAL SERVICE	255	211	44	220	180	40	30	27	3	12	9	3	17.2	11.7	4.7
MAIL CLERKS, EXCEPT POSTAL SERVICE	168	83	86	127	63	65	38	19	20	10	6	4	50.9	22.8	5.7
MESSENGERS	124	87	37	97	64	32	24	20	4	9	7	1	29.5	19.5	7.2
MATERIAL RECORDING, SCHEDULING, DISTRIBUTING CLERKS	1669	1004	665	1436	853	583	193	126	69	118	84	35	39.9	11.6	7.1
DISPATCHERS	187	98	90	166	89	77	18	7	12	3	3	0	47.9	9.9	1.8
PRODUCTION COORDINATORS	101	93	88	165	86	80	11	5	5	9	4	5	48.6	5.9	4.7
TRAFFIC, SHIPPING, & RECEIVING CLERKS	491	365	125	413	303	110	44	51	14	52	43	9	25.5	13.1	10.6
STOCK & INVENTORY CLERKS	546	322	225	464	265	199	69	48	21	36	24	12	41.1	12.6	6.6
METER READERS	42	39	3	35	33	3	6	6	0	2	2	0	6.2	14.0	5.9
WEIGHERS, MEASURERS, & CHECKERS	76	38	37	66	33	33	8	5	3	8	4	4	49.2	11.8	10.0
SAMPLERS	2	1	0	1	1	0	0	0	0	0	0	0	20.1	21.1	0.8
EXPEDITERS	113	43	70	101	39	62	11	3	8	5	3	2	61.9	9.4	4.3
MATERIAL RECORDING, SCHEDULING, DIST CLERKS, N.E.C.	31	4	28	25	4	21	6	0	5	4	0	3	87.9	17.8	12.5
ADJUSTERS & INVESTIGATORS	723	294	429	627	180	446	81	20	60	48	14	34	71.8	11.2	6.6
INSURANCE ADJUSTERS, EXAMINERS, & INVESTIGATORS	220	75	145	193	68	125	21	6	15	11	4	7	65.9	9.5	4.9
INVESTIGATORS & ADJUSTERS, EXCEPT INSURANCE	348	89	259	301	78	223	39	9	30	20	5	15	74.5	11.2	5.8
ELIGIBILITY CLERKS, SOCIAL WELFARE	58	7	51	46	6	40	11	1	10	9	1	7	87.7	18.7	15.3
BILL & ACCOUNT COLLECTORS	97	33	64	86	29	58	10	4	6	8	3	5	66.3	10.2	8.4
MISCELLANEOUS ADMINISTRATIVE SUPPORT	2728	408	2320	2296	339	1956	353	49	304	106	31	155	85.1	12.9	6.8
GENERAL OFFICE CLERKS	694	138	556	591	112	480	83	19	63	46	11	36	80.1	12.0	6.7
BANK TELLERS	484	34	450	440	29	412	29	2	27	32	3	29	93.0	6.0	6.6
PROOFREADERS	33	8	25	29	8	21	4	0	3	1	0	1	74.7	11.6	4.2
DATA-ENTRY KEYERS	353	33	320	272	25	247	69	6	63	27	2	25	90.7	19.5	7.6
STATISTICAL CLERKS	96	24	72	81	21	60	13	2	11	5	1	4	75.4	13.8	5.0
TEACHER AIDES	379	24	355	338	19	281	67	3	64	42	6	36	93.6	17.0	11.1
ADMINISTRATIVE SUPPORT OCCUPATIONS, N.E.C.	689	146	543	582	126	456	88	16	72	33	8	25	78.8	12.8	4.8

SOURCE: Current Population Survey, Bureau of Labor Statistics, Unpublished, 1986

TABLE 4-7 Continued

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX, RACE AND HISPANIC ORIGIN, ANNUAL AVERAGES, 1985

(Numbers In Thousands)

	EMPLOYED												% OF TOTAL EMPLOYED		
	TOTAL			WHITE			BLACK			HISPANIC			TOTAL	TOTAL	TOTAL
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	FEMALE	BLACK	HISPANIC
SERVICE OCCUPATIONS	14441	5695	8747	11432	4494	6938	2522	974	1547	1172	576	595	60.6	17.5	8.1
PROTECTIVE SERVICE	1718	1491	227	1428	1250	178	259	216	43	100	89	12	13.2	15.1	5.8
SUPERVISORS, PROTECTIVE SERVICE	134	126	8	119	113	6	13	11	1	5	5	0	5.8	9.5	4.0
SUPERVISORS, FIREFIGHTING & FIRE PREVENTION	27	27	0	27	26	0	0	0	0	0	0	0	1.1	0.3	1.5
SUPERVISORS, POLICE & DETECTIVES	73	69	3	65	63	2	6	5	1	3	3	0	4.6	8.7	3.8
SUPERVISORS, GUARDS	34	30	4	27	23	4	6	6	0	2	2	0	12.1	18.3	6.4
FIREFIGHTING & FIRE PREVENTION	209	206	3	196	192	2	12	12	0	8	8	0	1.4	5.9	3.7
FIRE INSPECTION & FIRE PREVENTION OCCUPATIONS	23	21	1	21	20	1	1	1	0	2	2	0	6.4	4.3	7.5
FIREFIGHTING OCCUPATIONS	186	185	1	172	171	1	11	11	0	6	6	0	0.8	6.1	3.3
POLICE & DETECTIVES	452	387	64	353	303	50	88	73	15	40	37	3	10.1	13.5	6.1
POLICE & DETECTIVES, PUBLIC SERVICE	419	385	34	365	337	28	47	41	6	28	27	1	8.2	11.3	6.6
SHERIFFS,BAILIFFS,OTHER LAW ENFORCEMENT OFFICERS	86	79	7	78	70	8	9	8	1	6	5	0	8.2	10.4	6.5
CORRECTIONAL INSTITUTION OFFICERS	147	123	24	112	96	16	32	25	7	6	5	1	16.6	21.6	4.2
GUARDS	722	572	151	562	442	120	146	119	27	47	39	9	20.9	20.2	6.6
CROSSING GUARDS	44	12	33	36	10	26	8	1	7	1	0	1	73.3	18.3	2.9
GUARDS & POLICE, EXCEPT PUBLIC SERVICE	615	526	89	466	408	64	135	116	20	43	36	7	14.5	21.9	7.0
PROTECTIVE SERVICE OCCUPATIONS, N.E.C.	63	34	29	60	31	28	3	2	0	3	3	0	45.9	4.3	4.6
SERVICE OCCUPATIONS, EXCEPT PVT HHLD & PROT SERVICE	11718	4166	7552	9312	3216	6095	1972	758	1222	973	486	487	64.4	16.8	8.3
FOOD PREPARATION & SERVICE OCCUPATIONS	5094	1912	3182	4236	1515	2722	613	264	349	422	255	167	62.5	12.0	8.3
SUPERVISORS, FOOD PREPARATION & SERVICE OCC	284	94	190	238	73	165	31	14	17	21	10	12	67.0	11.0	7.6
BARTENDERS	324	169	156	303	153	149	16	11	5	12	10	3	47.9	4.9	3.8
WAITERS & WAITRESSES	1367	218	1149	1241	176	1065	65	21	44	75	27	48	84.0	4.7	5.5
COOKS, EXCEPT SHORT ORDER	1553	757	796	1176	569	607	285	123	162	142	95	46	51.3	18.4	9.1
SHORT ORDER COOKS	103	66	38	79	51	28	21	13	8	5	4	1	36.5	20.7	4.4
FOOD COUNTER, FOUNTAIN & RELATED OCCUPATIONS	333	68	265	269	58	231	33	9	25	16	7	9	79.5	10.0	4.9
KITCHEN WORKERS, FOOD PREPARATION	134	34	101	106	28	78	24	4	20	13	8	6	74.8	18.8	9.8
WAITERS/WAITRESSES ASSISTANTS	350	209	140	289	173	116	43	23	19	53	39	14	40.1	12.2	15.2
MISC. FOOD PREPARATION OCCUPATIONS	646	298	348	516	233	282	94	45	49	84	55	29	53.9	14.6	13.0
CLEANING & BUILDING SERVICE OCCUPATIONS	2815	1684	1131	2027	1261	766	703	375	328	313	188	126	40.2	25.0	11.1
SUPERVISORS, CLEANING & BUILDING SERVICE WORKERS	148	95	54	111	73	38	34	19	15	15	8	6	36.2	22.6	9.9
MAIDS & HOUSEMEN	563	93	470	364	51	313	174	36	138	71	15	56	83.5	30.8	12.7
JANITORS & CLEANERS	2049	1446	603	1503	1093	410	492	317	175	222	159	63	29.4	24.0	10.9
ELEVATOR OPERATORS	15	13	2	11	9	2	3	3	0	3	3	0	12.2	18.7	20.7
PEST CONTROL	39	37	2	37	35	2	1	1	0	2	2	0	6.0	2.9	4.6
PERSONAL SERVICE OCCUPATIONS	2849	992	1857	1772	324	1449	225	56	169	139	30	109	80.9	11.8	6.8
SUPERVISORS, PERSONAL SERVICE	41	19	22	36	15	19	5	3	2	3	1	1	54.4	12.6	6.5
BARBERS	91	77	14	77	65	12	12	11	1	7	5	2	15.6	12.9	7.2
HAIRDRESSERS & COSMETOLOGISTS	707	71	636	635	63	572	56	7	51	49	8	41	89.9	8.2	7.0
ATTENDANTS, AMUSEMENT & RECREATION FACILITIES	125	75	50	109	65	44	12	7	4	6	3	3	39.9	9.3	4.9
GUIDES	33	16	17	26	12	14	6	4	2	2	1	1	52.6	17.0	4.6
USHERS	19	13	5	17	12	4	1	0	1	1	1	0	28.0	6.6	4.3
PUBLIC TRANSPORTATION ATTENDANTS	65	14	51	53	10	42	9	3	5	3	1	2	78.8	13.2	4.8
BAGGAGE PORTERS & BELLHOPS	28	19	1	14	13	1	5	5	0	4	4	0	4.7	24.3	18.1
WELFARE SERVICE AIDES	82	6	76	59	5	54	19	1	18	11	1	10	92.6	23.3	13.4
CHILD CARE WORKERS	738	28	710	646	21	625	79	6	72	43	1	42	96.1	10.6	5.9
PERSONAL SERVICE OCCUPATIONS, N.E.C.	128	54	74	102	42	61	21	9	12	12	5	7	58.0	16.2	9.8
PRECISION PRODUCTION, CRAFT, & REPAIR	13340	12213	1127	12107	11166	942	945	811	135	992	888	104	8.4	7.1	7.4
MECHANICS & REPAIRERS	4475	4322	153	4073	3948	125	308	285	23	295	285	10	3.4	6.9	6.6
SUPERVISORS, MECHANICS & REPAIRERS	266	244	22	247	229	18	17	13	3	8	7	1	8.3	6.2	3.2
MECHANICS & REPAIRERS, EXCEPT SUPERVISORS	4209	4078	131	3826	3719	107	291	272	19	286	278	9	3.1	6.9	6.8
VEHICLE & MOBILE EQUIPMENT MECHANICS & REPAIRERS	1850	1835	16	1697	1684	13	115	113	2	145	143	1	0.8	6.2	7.8
AUTOMOBILE MECHANICS	906	900	6	817	812	5	68	67	1	75	74	0	0.7	7.5	8.3
BUS, TRUCK, & STATIONARY ENGINE MECHANICS	347	346	2	328	319	1	23	23	0	20	20	0	0.4	6.6	5.9
AIRCRAFT ENGINE MECHANICS	90	86	4	84	81	3	5	4	1	9	9	1	4.2	5.6	10.3
SMALL ENGINE REPAIRERS	75	75	0	73	72	0	2	2	0	3	3	0	0.3	3.1	3.7
AUTOMOBILE BODY & RELATED REPAIRERS	212	210	3	197	195	2	9	9	0	22	22	-0	1.2	4.2	10.2
AIRCRAFT MECHANICS, EXCEPT ENGINE	15	14	1	13	12	1	1	1	0	1	1	-0	5.3	8.7	4.0
HEAVY EQUIPMENT MECHANICS	162	162	0	152	152	0	6	6	-0	10	10	0	0.1	3.8	6.0
FARM EQUIPMENT MECHANICS	43	43	0	42	41	0	1	1	0	5	5	0	0.6	2.2	12.2
INDUSTRIAL MACHINERY REPAIRERS	531	518	13	487	475	12	35	33	2	31	31	0	2.5	6.6	5.8
MACHINERY MAINTENANCE OCCUPATIONS	35	34	2	28	26	2	7	7	0	2	2	-0	4.7	19.6	5.0
ELECTRICAL & ELECTRONIC EQUIPMENT REPAIRERS	701	644	57	626	580	46	58	50	9	45	42	3	8.1	8.3	6.5
ELECT REPAIRERS,COMMUNICATIONS,INDUSTRIAL EQUIP	159	150	9	140	134	6	14	11	3	11	11	0	5.6	8.6	7.1
DATA PROCESSING EQUIPMENT REPAIRERS	119	107	12	109	99	10	8	6	2	5	5	0	10.4	6.4	4.4
HOUSEHOLD APPLIANCE & POWER TOOL REPAIRERS	50	49	1	45	44	1	5	5	0	2	2	0	2.4	9.9	4.1
TELEPHONE LINE INSTALLERS & REPAIRERS	68	67	2	63	61	2	4	4	0	7	7	0	4.6	6.4	10.1
TELEPHONE INSTALLERS & REPAIRERS	229	200	29	203	179	24	21	17	4	15	13	2	12.8	9.1	6.5
MISC ELECTRICAL & ELECTRONIC EQUIP REPAIRERS	75	71	3	67	64	3	7	6	0	5	4	0	4.5	9.1	6.4
HEATING,AIR CONDITIONING,REFRIGERATION MECHANICS	251	249	1	235	234	1	10	10	0	15	15	0	0.6	4.1	6.0
MISCELLANEOUS MECHANICS & REPAIRERS	841	799	42	753	720	33	65	59	7	48	45	4	5.0	7.7	5.8
CAMERA, WATCH, & MUSICAL INSTRUMENT REPAIRERS	35	33	2	32	31	2	1	1	0	2	2	0	5.3	3.9	6.9
LOCKSMITHS & SAFE REPAIRERS	25	24	1	22	22	1	1	1	-0	0	0	0	3.0	4.8	1.4
OFFICE MACHINE REPAIRERS	63	60	4	53	51	3	6	5	1	3	3	0	5.7	9.8	5.1
MECHANICAL CONTROLS & VALVE REPAIRERS	24	23	1	22	21	1	3	3	0	3	3	-0	2.6	13.4	10.1
ELEVATOR INSTALLERS & REPAIRERS	22	22	0	21	20	0	1	1	-0	0	0	0	0.8	6.6	1.6
MILLWRIGHTS	87	85	2	79	77	2	6	6	0	3	3	0	2.3	7.0	4.0
SPECIFIED MECHANICS & REPAIRERS, N.E.C.	420	394	26	378	357	21	33	29	4	25	22	3	6.3	7.9	6.0
NOT SPECIFIED MECHANICS & REPAIRERS	162	155	7	145	140	5	12	11	1	11	11	0	4.1	7.3	6.8
CONSTRUCTION TRADES	4745	4650	95	4359	4272	86	317	309	7	329	326	3	2.0	6.7	6.9
SUPERVISORS, CONSTRUCTION OCCUPATIONS	602	594	8	574	566	7	20	20	1	29	29	0	1.3	3.4	4.9
SUPERVISORS,BRICKMASONS,STONEMASONS,TILE SETTERS	6	6	0	6	6	0	0	0	0	1	1	0	0.0	0.0	13.5
SUPERVISORS, CARPENTERS & RELATED WORKERS	27	27	-0	26	26	-0	1	1	0	2	2	0	(Z)	2.1	6.1
SUPVSRS, ELECTRICIANS, & POWER TRANS INSTALLERS	46	46	0	43	43	0	1	1	0	1	1	0	0.6	2.8	2.2
SUPERVISORS, PRINTERS, PAPERHANGERS, & PLASTERERS	20	20	1	20	19	1	1	1	0	2	2	0	4.0	3.8	11.6
SUPERVISORS, PLUMBERS, PIPEFITTERS, STEAMFITTERS	14	14	0	12	12	0	1	1	0	-0	-0	0	0.0	4.6	(Z)
SUPERVISORS, N.E.C.	490	484	7	468	461	6	17	16	1	24	23	0	1.4	3.4	4.8

SOURCE: Current Population Survey, Bureau of Labor Statistics, Unpublished, 1986

TABLE 4-7 Continued

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX, RACE AND HISPANIC ORIGIN, ANNUAL AVERAGES, 1985

(Numbers In Thousands)

	EMPLOYED												% OF TOTAL EMPLOYED		
	TOTAL	TOTAL MALE	TOTAL FEMALE	WHITE TOTAL	WHITE MALE	WHITE FEMALE	BLACK TOTAL	BLACK MALE	BLACK FEMALE	HISPANIC TOTAL	HISPANIC MALE	HISPANIC FEMALE	TOTAL FEMALE	TOTAL BLACK	TOTAL HISPANIC
CONSTRUCTION TRADES, EXCEPT SUPERVISORS	4143	4056	87	3785	3706	79	296	290	7	299	297	2	2.1	7.2	7.2
BRICKMASONS & STONEMASONS	173	173	1	141	140	1	30	30	0	16	16	0	0.5	17.1	9.3
TILE SETTERS, HARD & SOFT	48	47	1	44	44	1	4	4	0	7	7	0	1.5	7.5	14.6
CARPET INSTALLERS	92	91	1	86	85	1	5	5	0	4	4	0	0.8	5.1	4.6
CARPENTERS	1259	1244	15	1178	1164	14	68	68	1	58	79	1	1.2	4.8	4.4
DRYWALL INSTALLERS	148	138	2	138	129	2	8	8	0	15	14	0	1.2	6.1	10.3
ELECTRICIANS	636	626	10	595	586	8	38	38	1	27	26	0	1.6	4.7	4.2
ELECTRICAL POWER INSTALLERS & REPAIRERS	107	106	1	96	96	1	10	10	0	3	3	0	0.8	9.3	2.8
PAINTERS, CONSTRUCTION & MAINTENANCE	496	465	31	446	417	29	42	40	2	41	41	0	6.3	8.5	8.3
PAPERHANGERS	25	15	9	24	15	9	1	0	1	1	1	0	30.2	3.6	3.9
PLASTERERS	33	33	0	28	28	0	5	5	-0	8	8	0	0.4	16.1	20.1
PLUMBERS, PIPEFITTERS, & STEAMFITTERS	454	449	5	418	414	4	28	27	1	24	24	0	1.0	6.1	5.3
CONCRETE & TERRAZZO FINISHERS	85	85	0	62	62	0	23	23	0	18	18	-0	0.2	26.5	21.4
GLAZIERS	44	44	2	41	39	2	4	4	1	3	3	0	4.7	9.6	7.1
INSULATION WORKERS	59	57	2	54	52	1	4	4	0	4	4	0	2.8	7.1	6.9
PAVING, SURFACING, & TAMPING EQUIP OPERATORS	7	7	0	5	5	0	2	2	0	1	1	0	2.9	24.2	13.1
ROOFERS	178	174	3	155	152	3	19	19	0	28	28	0	1.9	10.9	11.5
SHEETMETAL DUCT INSTALLERS	39	38	1	36	35	1	3	3	0	4	4	0	1.6	6.8	10.9
STRUCTURAL METAL WORKERS	68	68	0	64	64	0	3	3	0	4	3	0	0.7	4.2	5.8
DRILLERS, EARTH	17	17	0	16	16	0	1	1	0	0	0	0	1.3	4.6	2.8
CONSTRUCTION TRADES, N.E.C.	181	178	3	165	162	3	15	15	0	18	18	0	1.6	8.2	9.8
PRECISION PRODUCTION OCCUPATIONS	3926	3050	876	3490	2761	728	316	232	184	351	260	91	22.3	9.1	8.9
SUPERVISORS, PRODUCTION OCCUPATIONS	1317	1127	190	1192	1031	161	104	79	25	85	70	15	14.4	7.9	6.4
PRECISION METALWORKING OCCUPATIONS	914	856	58	842	795	47	58	46	6	72	67	5	6.3	5.5	7.8
TOOL & DIE MAKERS	143	140	3	140	138	3	2	2	0	4	4	0	2.0	1.6	2.5
PRECISION ASSEMBLERS, METAL	7	7	0	6	6	0	1	1	0	0	0	0	4.7	14.0	6.7
MACHINISTS	502	483	19	462	446	16	31	28	3	43	41	2	3.7	6.1	8.6
BOILERMAKERS	29	28	1	26	26	0	2	2	0	0	0	0	2.3	6.6	1.0
PRECISION GRINDERS, FITTERS, & TOOL SHARPENERS	22	20	1	20	19	1	2	2	0	1	1	0	4.4	7.7	4.2
PATTERNMAKERS & MODEL MAKERS, METAL	5	4	0	4	4	0	-0	0	-0	0	0	0	8.6	(Z)	6.9
LAY-OUT WORKERS	14	11	3	11	9	2	3	2	0	0	0	0	19.9	17.9	1.8
PRECIOUS STONES & METALS WORKERS	41	27	14	33	23	11	8	3	6	2	0	2	34.6	8.6	28.3
ENGRAVERS, METAL	21	12	9	20	11	8	1	1	0	1	1	0	42.9	4.3	3.4
SHEET METAL WORKERS	120	121	7	117	112	5	8	7	2	10	9	0	5.2	6.6	7.5
MISCELLANEOUS PRECISION METAL WORKERS	2	1	1	1	1	0	1	-0	1	0	0	0	34.8	26.7	28.0
PRECISION WOODWORKING OCCUPATIONS	110	93	17	103	89	14	6	4	2	10	10	0	15.5	5.8	9.1
PATTERNMAKERS & MODEL WORKERS, WOOD	7	7	0	7	7	0	0	0	0	0	0	0	1.7	1.1	8.3
CABINET MAKERS & BENCH CARPENTERS	59	57	3	58	55	3	0	0	-0	6	6	0	4.4	8.8	10.2
FURNITURE & WOOD FINISHERS	42	28	14	37	25	12	4	2	2	4	4	0	33.3	8.4	9.4
MISCELLANEOUS PRECISION WOODWORKERS	1	1	0	1	1	0	0	0	0	0	0	0	18.7	9.8	(Z)
PRECISION TEXTILE,APPAREL,FURNISHINGS MACHINE WKRS	256	115	141	226	100	126	19	10	8	40	26	14	55.1	7.2	15.7
DRESSMAKERS	105	9	103	95	4	90	5	0	5	13	2	11	95.5	4.6	12.6
TAILORS	43	25	18	35	21	15	5	3	2	9	7	2	42.2	11.8	20.9
UPHOLSTERERS	82	65	16	74	58	16	5	5	0	15	14	1	19.9	6.5	17.8
SHOE REPAIRERS	20	16	4	17	14	3	3	2	1	2	2	0	21.8	16.9	9.8
APPAREL & FABRIC PATTERNMAKERS	1	1	0	1	0	0	0	0	0	-0	-0	0	41.9	13.8	-8.2
MISC PRECISION APPAREL & FABRIC WORKERS	5	3	2	5	3	2	0	0	0	1	1	0	38.6	3.4	28.5
PRECISION WORKERS, ASSORTED MATERIALS	541	228	313	449	197	251	52	13	39	72	28	44	57.9	9.5	13.3
HAND MOLDERS & SHAPERS, EXCEPT JEWELERS	13	13	1	13	12	1	0	0	0	2	2	0	5.1	8.3	10.4
PATTERNMAKERS, LAY-OUT WORKERS, & CUTTERS	22	18	4	20	16	4	1	1	0	1	0	1	20.2	5.5	4.9
OPTICAL GOODS WORKERS	49	26	22	46	25	21	2	1	1	3	1	1	45.9	3.8	5.2
DENTAL LABORATORY & MEDICAL APPLIANCE TECHNICIANS	51	32	20	45	26	19	4	4	0	4	3	1	38.8	8.2	7.9
BOOKBINDERS	32	13	18	27	12	15	4	1	3	3	1	2	57.3	12.4	9.4
ELECTRICAL & ELECTRONIC EQUIPMENT ASSEMBLERS	338	95	243	266	78	188	39	6	33	53	15	38	71.8	11.6	15.8
MISCELLANEOUS PRECISION WORKERS, N.E.C.	36	31	5	33	28	5	1	1	1	5	5	0	14.3	3.4	15.8
PRECISION FOOD PRODUCTION OCCUPATIONS	429	310	119	368	274	93	51	29	23	51	41	10	27.7	11.9	12.8
BUTCHERS & MEAT CUTTERS	286	231	55	242	209	33	37	17	21	38	34	4	19.3	13.1	13.2
BAKERS	104	61	43	98	51	40	11	9	2	6	5	1	41.0	10.3	6.2
FOOD BATCHMAKERS	39	18	21	25	14	21	3	3	0	7	2	5	53.9	7.5	18.1
PRECISION INSPECTORS, TESTERS, & RELATED WORKERS	131	100	32	113	85	28	12	9	2	10	7	3	24.1	8.8	7.4
INSPECTORS, TESTERS, & GRADERS	124	96	28	107	82	25	11	9	2	9	7	2	22.6	8.7	7.4
ADJUSTERS & CALIBRATORS	8	4	4	6	3	3	1	1	0	1	0	1	46.6	9.7	7.1
PLANT & SYSTEM OPERATORS	228	221	7	196	190	7	25	25	1	12	12	0	3.2	11.1	5.1
WATER & SEWAGE TREATMENT PLANT OPERATORS	50	49	1	45	44	1	5	5	0	4	4	0	2.7	9.8	7.8
POWER PLANT OPERATORS	39	38	1	31	30	0	6	5	1	1	1	0	2.6	14.7	3.5
STATIONARY ENGINEERS	104	101	3	91	88	3	11	11	-0	4	4	0	2.7	10.3	3.4
MISCELLANEOUS PLANT & SYSTEM OPERATORS	34	32	2	30	28	2	4	4	-0	3	3	0	5.9	11.6	7.9
OPERATORS, FABRICATORS, & LABORERS	16816	12539	4277	13951	10521	3430	2465	1773	692	1681	1226	455	25.4	16.7	10.8
MACHINE OPERATORS, ASSEMBLERS, & INSPECTORS	7840	4601	3159	6483	3987	2496	1120	586	535	913	530	384	40.3	14.3	11.7
MACHINE OPERATORS & TENDERS, EXCEPT PRECISION	5191	3015	2177	4248	2542	1707	761	401	360	646	364	283	41.9	15.8	12.5
METALWORKING & PLASTIC WORKING MACHINE OPERATORS	470	367	83	409	344	65	49	33	16	37	32	5	17.6	10.4	7.9
LATHE & TURNING MACHINE SET-UP OPERATORS	30	27	3	28	25	3	1	1	0	2	2	0	8.9	2.7	7.9
LATHE & TURNING MACHINE OPERATORS	68	61	7	62	56	6	4	4	0	6	4	1	9.6	5.9	6.2
MILLING & PLANING MACHINE OPERATORS	15	13	2	13	12	1	1	1	0	1	1	0	11.0	8.3	8.6
PUNCHING & STAMPING PRESS MACHINE OPERATORS	116	83	34	97	71	25	18	9	8	11	9	2	29.1	15.2	9.5
ROLLING MACHINE OPERATORS	10	9	1	8	7	1	1	1	0	1	1	0	11.8	14.6	9.5
DRILLING & BORING MACHINE OPERATORS	34	24	10	30	22	8	3	1	2	1	1	0	29.4	9.9	4.2
GRINDING,ABRADING,BUFFING,POLISHING MACHINE OPS	141	121	19	121	105	15	16	12	3	12	11	1	13.8	13.1	6.8
FORGING MACHINE OPERATORS	16	15	1	13	12	1	2	2	0	1	0	0	6.3	11.6	3.2
NUMERICAL CONTROL MACHINE OPERATORS	2	2	0	2	2	0	0	0	0	-0	-0	0	5.4	9.8	-5.3
MISC METAL,PLASTIC,STONE,GLASS WORKING MACH OPS	38	32	6	34	30	5	3	2	1	2	2	0	16.6	8.8	5.8
FABRICATING MACHINE OPERATORS, N.E.C.	22	13	9	18	12	7	4	1	2	2	1	0	42.1	15.8	7.4
METAL & PLASTIC PROCESSING MACHINE OPERATORS	162	121	41	139	106	33	18	11	7	15	11	4	25.2	11.1	9.5
MOLDING & CASTING MACHINE OPERATORS	102	66	36	88	59	29	11	5	7	11	7	4	35.2	11.8	11.2
METAL PLATING MACHINE OPERATORS	36	33	3	31	28	2	3	3	0	3	3	0	8.4	9.8	7.9
HEAT TREATING EQUIPMENT OPERATORS	15	14	0	12	12	0	3	3	0	0	0	0	2.4	19.2	3.2
MISC METAL & PLASTIC PROCESSING MACHINE OPS	9	8	2	8	7	2	1	1	0	1	1	0	17.7	7.2	7.1

SOURCE: Current Population Survey, Bureau of Labor Statistics, Unpublished, 1986

TABLE 4-7 Continued

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX, RACE AND HISPANIC ORIGIN, ANNUAL AVERAGES, 1985

(Numbers In Thousands)

	EMPLOYED												% OF TOTAL EMPLOYED		
	TOTAL	TOTAL MALE	TOTAL FEMALE	WHITE TOTAL	WHITE MALE	WHITE FEMALE	BLACK TOTAL	BLACK MALE	BLACK FEMALE	HISPANIC TOTAL	HISPANIC MALE	HISPANIC FEMALE	TOTAL FEMALE	TOTAL BLACK	TOTAL HISPANIC
WOODWORKING MACHINE OPERATORS	142	127	14	117	105	12	22	20	2	11	10	0	10.2	15.5	7.4
WOOD LATHE,ROUTING, & PLANING MACHINE OPERATRS.	11	10	1	10	9	1	2	1	1	0	0	0	12.9	13.6	1.9
SAWING MACHINE OPERATORS	92	87	5	76	72	4	15	14	1	0	0	0	5.9	15.8	0.8
SHAPING & JOINING MACHINE OPERATORS	3	1	1	2	1	1	0	0	-0	-0	-0	0	46.7	6.6	(Z)
NAILING & TACKING MACHINE OPERATORS	2	2	0	2	1	0	0	0	0	0	0	0	15.0	15.4	15.8
MISCELLANEOUS WOODWORKING MACHINE OPERATORS	34	28	6	28	22	6	5	5	1	2	2	-0	18.2	16.0	5.5
PRINTING MACHINE OPERATORS	441	318	123	418	294	116	23	17	6	30	22	8	27.8	5.3	6.9
PRINTING MACHINE OPERATORS	291	245	46	269	226	43	17	14	3	22	19	4	15.9	6.0	7.6
PHOTOENGRAVERS & LITHOGRAPHERS	70	33	6	37	32	5	0	-0	0	2	1	1	15.0	0.9	4.3
TYPESETTERS & COMPOSITORS	73	21	51	69	18	51	2	2	0	3	1	2	70.5	3.1	3.9
MISCELLANEOUS PRINTING MACHINE OPERATORS	39	19	19	35	18	17	3	1	2	3	1	2	50.4	8.6	9.2
TEXTILE, APPAREL, & FURNISHINGS MACHINE OPERATORS	1336	271	1066	1011	202	809	256	60	197	209	49	160	79.8	19.2	15.7
WINDING & TWISTING MACHINE OPERATORS	81	18	63	52	11	41	29	7	22	0	0	0	77.9	35.9	0.3
KNITTING,LOOPING,TAPING,WEAVING MACHINE OPS	54	14	40	41	10	31	12	4	8	3	1	3	74.3	22.4	6.3
TEXTILE CUTTING MACHINE OPERATORS	6	4	2	4	2	2	1	2	-0	1	1	0	34.0	25.4	15.2
TEXTILE SEWING MACHINE OPERATORS	760	70	691	590	55	535	114	12	101	151	24	127	90.8	14.9	19.9
SHOE MACHINE OPERATORS	44	15	29	38	13	25	5	2	3	6	4	3	66.5	12.3	14.8
PRESSING MACHINE OPERATORS	142	45	97	95	31	64	42	10	32	22	9	12	68.6	29.3	15.2
LAUNDERING & DRY CLEANING MACHINE OPERATORS	176	66	110	135	51	83	36	12	24	21	9	12	62.6	20.6	12.0
MISCELLANEOUS TEXTILE MACHINE OPERATORS	75	41	34	56	29	28	17	11	6	4	2	2	45.7	22.7	6.0
FABRICATORS, ASSEMBLERS, & HAND WORKING OCCUPATIONS	1833	1269	564	1546	1096	450	237	147	91	201	130	63	30.8	13.0	11.0
WELDERS & CUTTERS	587	559	28	527	504	23	48	44	4	57	54	3	4.8	8.2	9.6
SOLDERERS & BRAZERS	40	14	26	35	12	23	2	1	1	8	4	4	64.8	6.1	19.2
ASSEMBLERS	1047	610	437	842	503	339	172	94	78	119	70	50	41.8	16.4	11.4
HAND CUTTING & TRIMMING OCCUPATIONS	20	12	8	15	10	5	4	1	3	4	2	2	41.0	18.2	21.1
HAND MOLDING, CASTING, & FORMING OCCUPATIONS	22	14	8	19	13	7	2	1	1	2	2	0	35.3	7.0	11.6
HAND PRINTING, COATING, & DECORATING OCCUPATIONS	34	23	11	32	21	11	3	2	1	2	1	1	23.5	7.6	5.8
HAND ENGRAVING & PRINTING OCCUPATIONS	19	10	9	16	10	6	1	1	0	3	2	1	45.9	6.5	16.1
HAND GRINDING & POLISHING OCCUPATIONS	4	1	3	3	1	3	0	0	-0	0	0	0	73.3	6.3	9.9
MISCELLANEOUS HAND WORKING OCCUPATIONS	61	27	35	55	23	32	5	3	3	6	3	2	56.8	8.9	9.0
PRODUCTION INSPECTORS,TESTERS,SAMPLERS, & WEIGHERS	815	398	418	689	350	340	102	38	64	66	28	38	51.2	12.5	8.1
PRODUCTION INSPECTORS, CHECKERS, & EXAMINERS	642	307	335	547	275	272	75	24	51	43	21	23	52.2	11.7	6.7
PRODUCTION TESTERS	57	38	19	52	35	17	4	2	2	3	1	2	33.1	7.2	5.5
PRODUCTION SAMPLERS & WEIGHERS	11	8	2	8	7	2	2	1	1	1	9	0	23.5	20.7	8.0
GRADERS & SORTERS, EXCEPT AGRICULTURAL	106	44	62	82	33	49	21	10	10	19	6	13	58.1	19.5	17.5
TRANSPORTATION & MATERIAL MOVING OCCUPATIONS	4535	4160	375	3849	3523	326	628	577	43	317	303	13	8.3	13.7	7.0
MOTOR VEHICLE OPERATORS	3303	2965	338	2787	2492	295	467	429	38	228	218	10	10.2	14.1	6.9
SUPERVISORS, MOTOR VEHICLE OPERATORS	51	42	9	46	38	8	5	4	1	3	3	0	17.4	9.8	6.0
TRUCK DRIVERS, HEAVY	1838	1800	38	1585	1551	34	237	234	3	109	108	0	2.1	12.9	5.9
TRUCK DRIVERS, LIGHT	576	515	61	467	431	36	74	71	4	55	53	2	10.6	12.9	9.5
DRIVERS-SALES WORKERS	214	199	14	199	185	14	13	13	0	12	11	1	6.7	6.3	5.6
BUS DRIVERS	394	200	194	307	142	165	82	55	26	23	17	6	49.2	20.8	5.8
TAXI CAB DRIVERS & CHAUFFEURS	183	163	20	128	112	17	44	41	3	20	19	1	10.9	23.8	11.0
PARKING LOT ATTENDANTS	45	43	2	33	31	2	11	10	0	7	7	-0	4.7	23.3	15.7
MOTOR TRANSPORTATION OCCUPATIONS, N.E.C.	2	2	0	2	2	0	0	0	0	-0	-0	0	0.0	21.8	(Z)
TRANSPORTATION OCCUPATIONS, EXCEPT MOTOR VEHICLES	200	204	4	195	191	4	12	11	1	6	6	0	2.0	5.8	3.1
RAIL TRANSPORTATION OCCUPATIONS	148	145	3	137	134	3	11	11	0	5	4	0	2.1	7.4	3.1
RAILROAD CONDUCTORS & YARDMASTERS	36	34	1	34	33	1	2	2	0	1	1	0	2.3	6.5	1.9
LOCOMOTIVE OPERATING OCCUPATIONS	59	58	1	56	55	1	3	3	0	3	3	0	2.5	5.7	4.3
RAILROAD BRAKE, SIGNAL, & SWITCH OPERATORS	46	45	1	41	40	1	5	5	0	1	1	0	1.7	10.3	1.3
RAIL VEHICLE OPERATORS, N.E.C.	7	7	-0	6	6	0	1	1	-0	1	1	0	(Z)	0.2	10.5
WATER TRANSPORTATION OCCUPATIONS	60	59	1	58	57	1	1	1	0	2	2	0	1.9	1.7	3.1
SHIP CAPTAINS & MATES, EXCEPT FISHING BOATS	33	32	1	32	32	1	0	0	0	0	0	0	1.6	0.6	8.5
SAILORS & DECKHANDS	18	18	0	17	17	0	1	1	0	1	1	0	0.7	3.2	6.8
MARINE ENGINEERS	1	1	-0	1	1	-0	-0	-0	0	0	0	0	(Z)	(Z)	19.5
BRIDGE, LOCK, & LIGHTHOUSE TENDERS	8	8	0	8	8	0	0	0	0	0	0	0	5.8	2.9	3.4
MATERIAL MOVING EQUIPMENT OPERATORS	1024	991	33	867	839	28	142	137	5	82	79	3	3.2	13.8	8.0
SUPERVISORS, MATERIAL MOVING EQUIP OPERATORS	13	13	0	11	11	0	2	2	0	2	2	0	1.3	12.1	15.3
OPERATING ENGINEERS	157	155	2	141	139	2	13	13	0	9	9	1	1.4	8.0	6.0
LONGSHORE EQUIPMENT OPERATORS	2	2	0	1	1	0	1	1	0	0	0	0	0.0	40.6	0.0
HOIST & WINCH OPERATORS	30	30	0	26	26	0	3	3	0	7	7	0	0.0	8.3	23.7
CRANE & TOWER OPERATORS	91	91	1	78	77	1	11	11	-0	6	6	0	0.7	12.3	6.3
EXCAVATING & LOADING MACHINE OPERATORS	113	112	1	101	100	1	10	9	1	5	5	0	1.2	8.4	4.7
GRADER, DOZER, & SCRAPER OPERATORS	102	101	1	98	97	1	4	3	0	4	4	0	1.4	3.7	3.5
INDUSTRIAL TRUCK & TRACTOR EQUIPMENT OPERATORS	398	386	12	311	300	11	83	82	1	40	40	1	3.1	20.9	10.2
MISC MATERIAL MOVING EQUIPMENT OPERATORS	117	102	15	100	88	12	16	14	2	9	7	2	12.7	14.0	7.3
FARMING, FORESTRY, & FISHING	3470	2917	552	3132	2617	515	269	245	24	326	289	37	15.9	7.8	9.4
FARM OPERATORS & MANAGERS	1359	1170	189	1328	1142	184	19	18	1	15	14	1	13.9	1.4	1.1
FARMERS	1244	1067	176	1218	1045	174	16	15	1	12	11	1	14.2	1.3	0.9
FARM MANAGERS	115	102	13	110	97	12	3	3	0	3	3	-0	11.2	2.3	3.0
OTHER AGRICULTURAL & RELATED OCCUPATIONS	1948	1592	356	1665	1342	324	232	209	22	303	268	35	18.3	11.9	15.6
FARM OCCUPATIONS, EXCEPT MANAGERIAL	1064	813	251	925	696	230	120	104	16	189	161	28	23.6	11.3	17.7
SUPERVISORS, FARM WORKERS	35	33	3	31	29	2	4	3	0	13	12	1	7.4	10.2	35.5
FARM WORKERS	993	762	232	863	650	213	115	100	14	170	146	24	23.3	11.6	17.1
MARINE LIFE CULTIVATION WORKERS	1	1	0	1	1	0	0	0	0	0	0	0	22.1	0.0	0.0
NURSERY WORKERS	34	17	16	31	16	15	2	1	1	4	3	3	48.6	4.9	18.6
RELATED AGRICULTURAL OCCUPATIONS	885	780	105	740	646	94	112	105	7	114	107	7	11.9	12.6	12.9
SUPERVISORS, RELATED AGRICULTURAL OCCUPATIONS	120	116	5	107	103	4	8	8	-0	12	12	0	3.7	6.6	10.3
GROUNDSKEEPERS & GARDENERS, EXCEPT FARM	662	624	38	539	507	32	98	94	4	94	93	2	5.8	14.7	14.2
ANIMAL CARETAKERS, EXCEPT FARM	83	35	48	78	32	46	4	2	2	2	0	1	58.2	5.1	1.9
GRADERS & SORTERS, AGRICULTURAL PRODUCTS	17	4	13	14	3	11	2	1	1	6	2	4	75.3	9.5	34.1
INSPECTORS, AGRICULTURAL PRODUCTS	2	1	1	2	1	1	0	-0	0	0	-0	0	62.6	10.7	11.8
FORESTRY & LOGGING OCCUPATIONS	101	97	4	80	77	3	18	17	1	2	2	0	3.9	17.9	1.8
SUPERVISORS, FORESTRY & LOGGING OCCUPATIONS	5	5	1	4	4	1	0	0	0	-0	-0	0	11.2	7.4	-0.2
FORESTRY WORKERS, EXCEPT LOGGING	19	16	3	16	14	2	3	2	1	2	1	0	13.8	13.6	8.5
TIMBER CUTTING & LOGGING OCCUPATIONS	77	76	1	60	60	0	15	15	0	0	0	0	1.0	19.6	0.4
FISHERS, HUNTERS, & TRAPPERS	61	58	3	58	56	3	1	1	0	6	5	0	5.0	1.1	9.5
CAPTAINS & OTHER OFFICERS, FISHING VESSELS	8	8	0	8	8	0	0	0	0	2	2	0	(Z)	1.9	24.9
FISHERS	51	48	3	49	46	2	1	1	0	4	3	0	5.6	1.1	7.2
HUNTERS & TRAPPERS	2	2	0	2	2	0	-0	-0	0	0	0	0	0.3	-0.4	4.3

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-8

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
CIVILIAN LABOR FORCE, 16 YEARS AND OVER	104449817 100.00%	59926488 57.37%	49800137 47.68%	5254596 5.03%	311862 0.30%	908824 0.87%	58011 0.06%	3593058 3.44%	44523329 42.63%	35877061 34.35%	5182629 4.96%	234595 0.22%	787596 0.75%	41783 0.04%	2399565 2.30%
Accountants and Auditors	1012857 100.00%	626558 61.86%	563916 55.68%	23174 2.29%	1272 0.13%	19212 1.90%	562 0.06%	18422 1.82%	386299 38.14%	324773 32.07%	30540 3.02%	1563 0.15%	15608 1.54%	445 0.04%	13380 1.32%
Actuaries	10319 100.00%	7682 74.45%	7280 70.55%	91 0.88%	0 0.00%	259 2.51%	6 0.06%	46 0.45%	2637 25.55%	2437 23.62%	94 0.91%	0 0.00%	78 0.76%	0 0.00%	28 0.27%
Agricultural/Food Scientists	24589 100.00%	19089 77.31%	17236 70.10%	797 3.24%	47 0.19%	438 1.78%	12 0.05%	479 1.95%	5580 22.69%	4780 19.44%	437 1.78%	37 0.15%	198 0.81%	0 0.00%	128 0.52%
Airplane Pilots/ Navigators	78188 100.00%	75149 98.64%	72545 95.22%	630 0.83%	285 0.37%	445 0.58%	50 0.07%	1194 1.57%	1039 1.36%	922 1.21%	26 0.03%	0 0.00%	13 0.02%	0 0.00%	78 0.10%
Architects	107853 100.00%	98743 91.69%	88047 81.76%	2643 2.45%	178 0.17%	3769 3.50%	123 0.11%	3983 3.70%	9110 8.31%	7852 7.29%	303 0.28%	30 0.03%	395 0.37%	0 0.00%	370 0.34%
Archivists/Curators	15302 100.00%	7735 50.55%	6743 44.07%	525 3.43%	33 0.22%	163 1.07%	6 0.04%	265 1.73%	7567 49.45%	6694 43.75%	551 3.60%	51 0.33%	71 0.46%	9 0.06%	191 1.25%
Artists/Performers/ Related Workers	49653 100.00%	29356 59.12%	25242 50.84%	1693 3.41%	220 0.44%	484 0.97%	61 0.12%	1656 3.34%	20297 40.88%	18416 37.09%	807 1.63%	126 0.25%	313 0.63%	65 0.13%	570 1.15%
Actors/Directors	67180 100.00%	44049 65.57%	39591 58.93%	2384 3.55%	191 0.28%	513 0.76%	17 0.03%	1353 2.01%	23131 34.43%	20343 30.28%	1456 2.17%	76 0.11%	337 0.50%	29 0.04%	890 1.32%
Authors	45748 100.00%	25409 55.54%	23809 52.04%	592 1.29%	85 0.19%	276 0.60%	56 0.12%	591 1.29%	20339 44.46%	19094 41.74%	616 1.35%	64 0.14%	166 0.36%	43 0.09%	356 0.78%
Dancers	13194 100.00%	3350 25.39%	2631 19.94%	317 2.40%	19 0.14%	140 1.06%	0 0.00%	243 1.84%	9844 74.61%	7934 60.13%	817 6.19%	83 0.63%	448 3.40%	18 0.14%	544 4.12%
Musicians/Composers	140556 100.00%	99065 70.48%	84413 60.06%	7157 5.09%	486 0.35%	1393 0.99%	143 0.10%	5473 3.89%	41491 29.52%	38021 27.05%	1942 1.38%	152 0.11%	628 0.45%	29 0.02%	719 0.51%
Painters/Sculptors/ Artists	153162 100.00%	79445 51.87%	69374 45.29%	3316 2.17%	653 0.43%	1938 1.27%	112 0.07%	4052 2.65%	73717 48.13%	68794 44.92%	1474 0.96%	415 0.27%	1388 0.91%	73 0.05%	1573 1.03%
Photographers	94762 100.00%	72496 76.50%	63991 67.53%	3832 4.04%	207 0.22%	1366 1.44%	115 0.12%	2985 3.15%	22266 23.50%	20198 21.31%	952 1.00%	139 0.15%	212 0.22%	0 0.00%	765 0.81%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-8 Continued

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Atmospheric/Space Scientists	8415	6988	6383	281	45	108	28	145	1429	1219	129	2	28	0	53
	100.00%	83.02%	75.85%	3.34%	0.53%	1.28%	0.31%	1.72%	16.98%	14.49%	1.53%	0.02%	0.31%	0.00%	0.63%
Biological/Life Scientists	46079	30840	27825	871	60	1483	60	541	15239	12898	806	52	1012	32	439
	100.00%	66.93%	60.39%	1.89%	0.13%	3.22%	0.13%	1.17%	33.07%	27.99%	1.75%	0.11%	2.20%	0.07%	0.95%
Chemists, ex. Biochemists	102239	81699	70726	3571	145	5322	142	1794	20540	15849	1456	58	2348	39	792
	100.00%	79.91%	69.18%	3.49%	0.14%	5.21%	0.14%	1.75%	20.09%	15.50%	1.42%	0.06%	2.30%	0.04%	0.77%
Clergy	283044	266610	242223	15093	691	3113	159	5331	16434	14681	952	69	155	10	568
	100.00%	94.19%	85.58%	5.33%	0.24%	1.10%	0.06%	1.88%	5.81%	5.19%	0.34%	0.02%	0.05%	0.00%	0.20%
Computer Programmers	317873	218716	193052	9890	604	8845	248	8079	98957	82581	7856	288	5478	118	2680
	100.00%	68.85%	60.77%	3.11%	0.19%	2.78%	0.08%	1.91%	31.15%	25.99%	2.47%	0.08%	1.72%	0.04%	0.84%
Computer Systems Analysts/Scientists	202851	157140	141521	5999	389	5435	175	3841	45611	38952	3405	170	1772	50	1182
	100.00%	77.54%	69.83%	2.96%	0.18%	2.68%	0.09%	1.80%	22.48%	19.22%	1.68%	0.08%	0.87%	0.02%	0.67%
Counselors, Educational/ Vocational	198258	90587	73447	10607	1059	1219	93	4162	107869	83405	17183	1379	1395	99	4208
	100.00%	45.69%	37.05%	5.35%	0.53%	0.61%	0.05%	2.10%	54.31%	42.07%	8.67%	0.70%	0.70%	0.05%	2.12%
Designers	338374	169604	151191	5928	481	4578	174	7252	168770	154070	4834	333	3458	109	5966
	100.00%	50.12%	44.68%	1.75%	0.14%	1.35%	0.05%	2.14%	49.88%	45.53%	1.43%	0.10%	1.02%	0.03%	1.76%
Dieticians	67270	6787	4224	1907	25	179	27	425	60483	43289	12493	307	2304	32	2058
	100.00%	10.09%	6.28%	2.83%	0.04%	0.27%	0.04%	0.63%	89.91%	64.36%	18.57%	0.46%	3.43%	0.05%	3.06%
Economists	95565	67218	61773	2096	189	1589	98	1483	28347	26241	1828	88	585	37	608
	100.00%	70.34%	64.64%	2.19%	0.18%	1.67%	0.10%	1.55%	29.66%	28.41%	1.91%	0.07%	0.59%	0.04%	0.64%
Editors/Reporters	210831	106942	97788	3292	271	1888	182	3585	103889	93820	4161	339	1499	148	3922
	100.00%	50.72%	46.37%	1.56%	0.13%	0.89%	0.08%	1.70%	49.28%	44.50%	1.97%	0.16%	0.71%	0.07%	1.86%
Engineers*	1445042	1388801	1252362	29420	3023	59967	1734	30304	56241	44494	4527	225	2674	98	1564
	100.00%	6.11%	86.66%	2.04%	0.21%	4.15%	0.12%	2.10%	3.89%	3.08%	0.31%	0.02%	0.19%	0.01%	0.11%
Forestry/Conservation Scientists	35587	31985	29682	955	467	205	33	663	3582	3133	188	89	63	0	129
	100.00%	89.93%	83.40%	2.69%	1.31%	0.58%	0.09%	1.86%	10.07%	8.81%	0.53%	0.19%	0.18%	0.00%	0.36%
Geologists/Geodesists	48127	40985	38969	488	85	821	46	778	5142	4788	205	10	91	5	83
	100.00%	88.85%	84.48%	1.06%	0.18%	1.35%	0.10%	1.88%	11.15%	10.34%	0.41%	0.02%	0.20%	0.01%	0.14%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-8 Continued

Executives and Managers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Executive and Managerial Occupations	14465792 100.00%	10703281 73.99%	9616281 66.48%	486311 3.36%	38014 0.26%	146882 1.02%	7919 0.05%	407874 2.82%	3762531 26.01%	3228159 22.32%	297396 2.06%	17307 0.12%	58456 0.40%	3181 0.02%	158052 1.09%
Business/Promotion Agents	20807 100.00%	13780 66.87%	12183 59.12%	806 3.91%	34 0.16%	134 0.65%	12 0.06%	611 2.97%	6827 33.13%	6227 30.22%	321 1.56%	25 0.12%	78 0.38%	7 0.03%	168 0.82%
Education/Related Fields Administrators	387538 100.00%	239766 61.87%	210678 54.36%	20154 5.20%	945 0.24%	1718 0.44%	158 0.04%	6113 1.58%	147772 38.13%	121224 31.28%	19193 4.95%	1050 0.27%	1532 0.40%	101 0.03%	4672 1.21%
Financial Managers	409844 100.00%	281218 68.62%	261088 63.70%	6792 1.66%	402 0.10%	5242 1.28%	141 0.03%	7553 1.84%	128626 31.38%	116748 28.49%	5989 1.46%	317 0.08%	1678 0.41%	74 0.02%	3822 0.93%
Managers/Administrators, Misc., Salaried	4658661 100.00%	3404912 73.09%	3120455 66.98%	112058 2.41%	8748 0.21%	53899 1.16%	2792 0.06%	105960 2.27%	1253749 26.91%	1111272 23.85%	75684 1.62%	5482 0.12%	18142 0.39%	1170 0.03%	42019 0.90%
Managers/Administrators Misc., Self-Employed	573848 100.00%	419697 73.14%	377417 65.77%	12241 2.13%	1258 0.22%	12124 2.11%	540 0.09%	16117 2.81%	154149 26.86%	136580 23.80%	4697 0.82%	635 0.11%	6003 1.05%	159 0.03%	6075 1.06%
Marketing/Advertising/ Related Fields Mgrs.	688875 100.00%	567362 82.36%	540409 78.45%	9084 1.32%	990 0.14%	5348 0.78%	280 0.04%	11293 1.64%	121513 17.64%	111891 16.24%	4310 0.63%	327 0.05%	1486 0.21%	93 0.01%	3427 0.50%
Medicine/Health Managers	118881 100.00%	54583 49.23%	48300 43.56%	3872 3.49%	205 0.18%	709 0.64%	38 0.03%	1459 1.32%	56298 50.77%	47788 43.10%	5608 5.06%	359 0.32%	805 0.73%	16 0.01%	1724 1.55%
Personnel/Labor Relations Managers	219945 100.00%	140747 63.99%	124144 56.44%	8051 3.66%	439 0.20%	1777 0.81%	89 0.04%	6247 2.84%	79198 36.01%	68296 31.06%	6198 2.82%	302 0.14%	1142 0.52%	54 0.02%	3206 1.46%
Properties/Real Estate Managers	200072 100.00%	117835 58.90%	100921 50.44%	7859 3.93%	584 0.29%	1317 0.66%	128 0.06%	7248 3.62%	82237 41.10%	73054 36.51%	4879 2.44%	493 0.25%	824 0.41%	39 0.02%	2948 1.47%
Proprietors/Supervisors/ Sales, Self-Employed	451358 100.00%	324958 71.97%	293777 65.09%	9577 2.12%	920 0.20%	7987 1.77%	272 0.06%	12325 2.73%	126518 28.03%	114284 25.32%	3844 0.81%	536 0.12%	3855 0.81%	89 0.02%	4360 0.96%
Protective Services Administrators	26237 100.00%	23769 90.59%	22141 84.39%	824 3.14%	144 0.55%	98 0.37%	7 0.03%	555 2.12%	2468 9.41%	2063 7.82%	270 1.03%	21 0.08%	18 0.08%	7 0.03%	101 0.38%
Public Administration Administrators/Officials	295983 100.00%	196485 66.38%	171787 58.04%	13402 4.53%	1861 0.63%	2615 0.88%	188 0.06%	6812 2.23%	99518 33.62%	83182 28.10%	11013 3.72%	818 0.28%	1053 0.36%	73 0.02%	3379 1.14%
Public Administration Chief Exec./ Gen. Adminis.	35777 100.00%	27458 76.75%	22416 62.65%	3184 8.88%	429 1.20%	251 0.70%	35 0.10%	1223 3.42%	8319 23.25%	6078 16.99%	1655 4.63%	111 0.31%	148 0.41%	12 0.03%	315 0.88%
Purchasing Managers	71199 100.00%	56088 78.78%	52456 73.68%	1433 2.01%	131 0.18%	655 0.92%	49 0.07%	1364 1.92%	15111 21.22%	13389 18.81%	1016 1.43%	48 0.06%	235 0.33%	15 0.02%	410 0.58%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-8 Continued

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Lawyers	501834	432559	412528	9224	750	2710	332	7017	69275	61893	4226	287	943	93	1913
	100.00%	86.20%	82.20%	1.84%	0.15%	0.54%	0.07%	1.40%	13.80%	12.33%	0.84%	0.04%	0.19%	0.02%	0.38%
Judges	27845	23083	21213	1162	130	124	23	431	4762	4051	521	50	18	0	122
	100.00%	82.90%	76.18%	4.17%	0.47%	0.45%	0.08%	1.55%	17.10%	14.55%	1.87%	0.18%	0.06%	0.00%	0.44%
Legislators	10669	7112	6192	399	253	118	4	146	3557	3233	166	65	48	11	34
	100.00%	66.66%	58.04%	3.74%	2.37%	1.11%	0.04%	1.37%	33.34%	30.30%	1.56%	0.61%	0.45%	0.10%	0.32%
Librarians	187379	32779	27838	2347	120	1056	72	1348	154600	136708	11366	499	2876	123	3028
	100.00%	17.49%	14.86%	1.25%	0.06%	0.56%	0.04%	0.72%	82.51%	72.96%	6.07%	0.27%	1.53%	0.07%	1.62%
Mathematical Scientists, Misc.	6401	5188	4578	248	25	200	7	132	1213	959	179	0	60	0	15
	100.00%	81.05%	71.49%	3.87%	0.39%	3.12%	0.11%	2.06%	18.95%	14.98%	2.80%	0.00%	0.94%	0.00%	0.23%
Medical Scientists	20065	11904	10348	434	23	673	33	393	8161	6870	441	28	558	25	239
	100.00%	59.33%	51.57%	2.16%	0.11%	3.35%	0.16%	1.96%	40.67%	34.24%	2.20%	0.14%	2.78%	0.12%	1.19%
Medical/Health Practitioners															
Dentists	125291	116916	108990	2666	167	3226	55	1812	8375	6890	468	18	606	12	381
	100.00%	93.32%	86.99%	2.13%	0.13%	2.57%	0.04%	1.45%	6.68%	5.50%	0.37%	0.01%	0.48%	0.01%	0.30%
Nurses, Licensed Practical	435178	14764	10652	2910	128	322	18	734	420412	322480	74942	2862	5575	425	14328
	100.00%	3.39%	2.45%	0.67%	0.03%	0.07%	0.00%	0.17%	96.61%	74.10%	17.22%	0.61%	1.28%	0.10%	3.29%
Nurses, Registered	1285299	52755	42605	5383	175	1892	110	2610	1232544	1071709	90009	3681	41054	1161	24930
	100.00%	4.10%	3.31%	0.42%	0.01%	0.15%	0.01%	0.20%	95.90%	83.38%	7.00%	0.29%	3.19%	0.09%	1.94%
Optometrists	24605	22569	21544	198	38	461	8	322	2036	1765	56	8	97	0	110
	100.00%	91.73%	87.56%	0.80%	0.15%	1.87%	0.03%	1.31%	8.27%	7.17%	0.23%	0.03%	0.39%	0.00%	0.45%
Pharmacists	145637	110635	101051	2949	158	4313	136	2028	35002	29385	1768	89	2269	29	1464
	100.00%	75.97%	69.39%	2.02%	0.11%	2.96%	0.09%	1.39%	24.03%	20.18%	1.21%	0.06%	1.56%	0.02%	1.01%
Physicians	433255	375289	317142	10090	388	30656	732	16283	57966	40700	3153	127	11262	154	2570
	100.00%	86.62%	73.20%	2.33%	0.09%	7.08%	0.17%	3.76%	13.38%	9.39%	0.73%	0.03%	2.60%	0.04%	0.59%
Podiatrists	7781	7124	6805	203	0	54	0	62	657	538	78	0	41	0	0
	100.00%	91.56%	87.46%	2.61%	0.00%	0.69%	0.00%	0.80%	8.44%	6.91%	1.00%	0.00%	0.53%	0.00%	0.00%
Veterinarians	34355	29797	28708	402	56	359	23	251	4558	4216	120	6	73	6	137
	100.00%	86.73%	83.56%	1.17%	0.16%	1.04%	0.07%	0.73%	13.27%	12.27%	0.35%	0.02%	0.21%	0.02%	0.40%
Health Diagnosing Practitioners, Misc.	21539	18851	17954	191	28	444	18	216	2688	2375	91	6	134	0	102
	100.00%	87.52%	83.36%	0.89%	0.13%	2.06%	0.08%	1.00%	12.48%	11.03%	0.33%	0.03%	0.62%	0.00%	0.47%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-8 Continued

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Management Analysts	118581 100.00%	88652 74.76%	82171 69.30%	2994 2.52%	296 0.25%	1262 1.06%	120 0.10%	1809 1.53%	29929 25.24%	25971 21.90%	2483 2.09%	177 0.15%	410 0.35%	31 0.03%	857 0.72%
Operations/Systems Researchers/Analysts	80876 100.00%	58435 72.25%	52908 65.42%	2458 3.04%	158 0.20%	1488 1.84%	70 0.09%	1353 1.67%	22441 27.75%	18860 23.32%	2418 2.99%	81 0.10%	557 0.69%	6 0.01%	519 0.64%
Physicists/Astronomers	22473 100.00%	21253 94.57%	19352 86.11%	314 1.40%	30 0.13%	1152 5.13%	81 0.36%	324 1.44%	1220 5.43%	1102 4.90%	41 0.18%	0 0.00%	40 0.18%	0 0.00%	37 0.16%
Psychologists	92929 100.00%	49102 52.84%	44635 48.03%	2362 2.54%	143 0.15%	515 0.55%	68 0.07%	1379 1.48%	43827 47.16%	37766 40.64%	4100 4.41%	193 0.21%	546 0.59%	94 0.10%	1128 1.21%
Public Relations Specialists	120037 100.00%	61442 51.19%	55764 46.46%	2980 2.48%	189 0.16%	766 0.64%	88 0.07%	1655 1.38%	58595 48.81%	52340 43.60%	3495 2.91%	265 0.22%	657 0.55%	28 0.02%	1810 1.51%
Social Scientists, Misc.	13477 100.00%	8177 60.67%	7483 55.52%	214 1.59%	38 0.28%	172 1.28%	19 0.14%	251 1.86%	5300 39.33%	4739 35.16%	242 1.80%	30 0.22%	95 0.70%	5 0.04%	189 1.40%
Sociologists	2550 100.00%	1489 58.39%	1294 50.75%	111 4.35%	0 0.00%	44 1.73%	0 0.00%	40 1.57%	1061 41.61%	927 36.35%	42 1.65%	12 0.47%	48 1.88%	0 0.00%	32 1.25%
Social Workers	459384 100.00%	161258 35.06%	118446 25.75%	26559 5.77%	1623 0.35%	2601 0.57%	271 0.06%	11758 2.56%	298126 64.94%	215573 46.87%	60946 13.25%	2565 0.56%	3765 0.82%	403 0.09%	15474 3.36%
Statisticians	30200 100.00%	15684 51.93%	13711 45.40%	786 2.60%	41 0.14%	733 2.43%	15 0.05%	398 1.32%	14516 48.07%	11917 39.46%	1595 5.28%	57 0.19%	497 1.65%	11 0.04%	439 1.45%
Surveying/Mapping Scientists	31834 100.00%	30313 95.82%	28089 88.79%	713 2.25%	279 0.88%	222 0.70%	16 0.05%	994 3.14%	1321 4.18%	1173 3.71%	44 0.14%	13 0.04%	10 0.03%	8 0.03%	73 0.23%
Teachers, Elem./Secondary	3363514 100.00%	950590 28.26%	842201 25.04%	67854 2.02%	3765 0.11%	8798 0.26%	810 0.02%	27162 0.81%	2412924 71.74%	2036833 60.56%	271570 8.07%	10098 0.30%	24329 0.72%	1439 0.04%	68657 2.04%
Teachers, Postsecondary*	995755 100.00%	540289 54.26%	481153 48.32%	23872 2.40%	1918 0.19%	18007 1.81%	921 0.09%	14418 1.45%	455466 45.74%	401387 40.31%	30443 3.06%	1751 0.18%	8608 0.86%	463 0.05%	12814 1.29%
Technical Writers	49596 100.00%	30984 62.47%	28753 57.97%	1097 2.21%	100 0.20%	475 0.96%	29 0.06%	530 1.07%	18612 37.53%	16864 34.00%	1156 2.33%	81 0.16%	160 0.32%	22 0.05%	328 0.66%
Urban Planners	13337 100.00%	10128 75.94%	8732 65.47%	646 4.84%	81 0.61%	274 2.05%	8 0.06%	387 2.90%	3209 24.06%	2561 19.20%	441 3.31%	16 0.12%	58 0.43%	0 0.00%	133 1.00%
Underwriters	18597 100.00%	7752 41.68%	7021 37.75%	333 2.11%	12 0.06%	127 0.68%	0 0.00%	199 1.07%	10845 58.32%	9522 51.20%	774 4.16%	21 0.11%	105 0.56%	11 0.06%	412 2.22%

Further breakouts are in the subject matter sections

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1983, National Science Foundation, NSF 85-303

TABLE 4-9

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE AND HISPANIC ORIGIN 1983

		All Races		White		Black		American Indian		Asian		Hispanic**		No Report
	Sex	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
TOTAL	**Total**	**395,033**		**352,276**	**89.2**	**5,273**	**1.3**	**443**	**0.1**	**30,910**	**7.8**	**5,646**	**1.4**	**5,926**
ALL FIELDS	**Women**	**54,551**	**13.8**	**48,563**		**1,436**		**51**		**3,743**		**790**		**710**
PHYSICAL	**Total**	**69,579**		**61,802**	**88.8**	**753**	**1.1**	**68**	**0.1**	**5,874**	**8.4**	**915**	**1.3**	**1,058**
SCIENTISTS	**Women**	**4,809**	**6.9**	**3,963**		**56**		*		**735**		**77**		**54**
Chemists	Total	45,569		40,359	88.6	486	1.1	43	0.1	3,986	8.7	693	1.5	672
	Women	3,978	8.7	3,254		49		*		631		67		43
Physicists/	Total	24,010		21,443	89.3	267	1.1	25	0.1	1,888	7.9	222	0.9	386
Astronomers	Women	831	3.5	709		7		*		104		10		11
MATHEMATICAL	**Total**	**17,357**		**15,435**	**89.0**	**183**	**1.1**	**14**	**0.1**	**1,413**	**8.1**	**232**	**1.3**	**292**
SCIENTISTS	**Women**	**1,561**	**9.0**	**1,301**		**31**		*		**204**		**29**		**23**
Mathema-	Total	14,470		13,042	90.1	158	1.1	12	0.1	1,006	7.0	223	1.5	252
ticians	Women	1,246	8.6	1,053		26		*		144		26		23
Statis-	Total	2,887		2,411	83.5	25	0.9	2	0.1	407	14.1	9	0.3	40
ticians	Women	315	10.9	248		5		*		60		3		*
COMPUTER	**Total**	**12,304**		**11,136**	**90.5**	**49**	**0.4**	**3**	**0.0**	**945**	**7.8**	**232**	**1.9**	**156**
SCIENTISTS	**Women**	**1,288**	**10.5**	**1,122**		**18**		*		**148**		**9**		*
ENVIRON.	**Total**	**17,141**		**16,131**	**94.1**	**33**	**0.2**	**11**	**0.1**	**772**	**4.5**	**210**	**1.2**	**175**
SCIENTISTS	**Women**	**988**	**5.8**	**910**		**5**		*		**60**		**19**		**4**
Earth	Total	13,077		12,270	93.8	29	0.2	9	0.1	627	4.8	160	1.2	130
Scientists	Women	704	5.4	664		3		*		31		7		4
Ocean-	Total	1,798		1,726	96.0	2	0.1	-	-	61	3.4	20	1.1	2
ography	Women	190	10.6	174		2		*		7		9		*
Atmospheric	Total	2,266		2,135	94.2	2	0.1	2	0.1	84	3.7	30	1.3	43
Scientists	Women	94	4.1	72		*		*		22		3		*
ENGINEERS	**Total**	**63,786**		**51,628**	**80.9**	**415**	**0.7**	**39**	**0.1**	**10,816**	**17.0**	**952**	**1.5**	**885**
	Women	**1,134**	**1.8**	**831**		**22**		**8**		**262**		**21**		**11**
LIFE	**Total**	**101,401**		**91,306**	**90.0**	**1,230**	**1.2**	**100**	**0.1**	**7,154**	**7.1**	**1,383**	**1.4**	**1,527**
SCIENTISTS	**Women**	**18,530**	**18.3**	**16,229**		**447**		**18**		**1,607**		**229**		**222**
Biological	Total	60,919		54,749	89.9	699	1.1	47	0.1	4,474	7.3	717	1.2	929
Scientists	Women	12,488	20.5	10,898		274		9		1,168		130		135
Agricultural	Total	16,005		14,775	92.3	78	0.5	34	0.2	903	5.6	316	2.0	195
Scientists	Women	771	4.8	665		7		2		88		21		7
Medical	Total	24,477		21,782	89.0	453	1.9	19	0.1	1,777	7.3	350	1.4	403
Scientists	Women	5,271	21.5	4,666		166		7		351		78		80
PSYCHO-	**Total**	**49,716**		**47,177**	**94.9**	**1,023**	**2.1**	**73**	**0.1**	**658**	**1.3**	**742**	**1.5**	**756**
LOGISTS	**Women**	**14,934**	**30.0**	**13,892**		**475**		**19**		**296**		**232**		**239**
SOCIAL	**Total**	**63,749**		**57,643**	**90.4**	**1,587**	**2.5**	**135**	**0.2**	**3,269**	**5.1**	**980**	**1.5**	**1,077**
SCIENTISTS	**Women**	**11,307**	**17.7**	**10,315**		**382**		**6**		**431**		**174**		**157**
Economists	Total	18,107		16,067	88.7	319	1.8	60	0.3	1,347	7.4	337	1.9	297
	Women	1,598	8.8	1,430		34		*		111		40		23
Sociologists/	Total	13,426		12,326	91.8	436	3.2	34	0.3	450	3.4	163	1.2	161
Anthropol.	Women	3,964	29.5	3,672		122		3		96		37		57
Other Social	Total	32,216		29,250	90.8	832	2.6	41	0.1	1,472	4.6	458	1.4	619
Scientists	Women	5,745	17.8	5,213		226		3		224		90		77

* No cases reported. **Estimated Hispanics also are included in other racial groups.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1983, National Science Foundation, NSF 85-303

TABLE 4-10

EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE AND SEX, 1983

FIELD	SEX	YEARS OF PROFESSIONAL EXPERIENCE																			
		1 or Less		2-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Years		25-29 Years		30-34 Years		35-39 Years		40 or More		Total*
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
All Fields	Total	4,728	1.3	31,451	8.5	60,824	16.5	64,420	17.4	50,189	13.6	36,620	9.9	26,947	7.3	21,510	5.9	8,996	2.4	6439	1.7	369,320
	Women	1,202	2.5	7,673	15.7	12,350	25.3	8,712	17.8	4,787	9.8	3,018	6.2	1,706	3.5	1,133	2.3	611	1.3	430	0.9	48,826
Chemists	Total	608	1.5	3,648	8.8	6,198	15.0	5,998	14.5	6,037	14.6	4,103	9.9	3,856	9.3	2,780	6.7	1,154	2.8	1,113	2.7	41,298
	Women	104	3.0	634	18.6	758	22.0	509	14.7	330	9.6	227	6.6	127	3.7	99	2.9	88	2.6	50	1.4	3,451
Physicists/ Astronomers	Total	153	0.7	1,545	7.3	2,897	12.8	4,078	18.0	3,784	16.7	2,886	12.7	1,637	7.2	1,252	5.5	617	2.7	511	2.7	22,688
	Women	16	2.2	141	19.9	172	23.8	114	15.7	83	11.5	39	5.4	22	3.0	19	2.6	12	1.7	5	0.7	724
Mathematicians	Total	133	1.0	916	6.7	1,732	12.7	2,177	16.0	2,214	16.3	1,398	10.3	970	7.1	747	5.5	360	2.6	190	1.4	13,589
	Women	13	1.2	104	9.3	248	22.2	208	18.6	121	10.8	85	7.6	59	5.3	40	3.6	27	2.4	10	0.9	1,118
Statisticians	Total	4	0.1	204	7.3	543	19.5	488	17.5	326	11.7	436	15.6	131	4.7	102	3.7	42	1.5	67	2.4	2,790
	Women	4	1.3	58	19.5	95	31.9	48	16.2	13	4.4	32	10.8	4	1.3	5	1.7	+	-	4	1.3	297
Computer/Info. Specialists	Total	197	1.6	985	8.1	2,570	21.1	2,787	22.9	1,480	12.2	863	7.1	525	4.3	461	3.8	102	0.9	132	1.1	12,164
	Women	6	0.5	168	13.3	318	25.1	350	27.6	131	10.3	44	3.5	30	2.4	19	1.5	5	0.4	+	-	1,266
Environmental Scientists	Total	283	1.7	1,423	8.6	2,608	15.8	2,991	18.2	2,401	14.6	1,588	9.6	1,132	6.9	1,018	6.2	518	3.1	398	2.4	16,467
	Women	31	3.4	163	17.8	305	33.4	132	14.4	69	7.5	49	5.4	30	3.3	16	1.7	3	0.3	9	1.0	914
Engineers	Total	688	1.1	4,323	7.0	8,000	13.0	9,973	16.2	9,776	15.9	7,412	12.0	4,826	7.8	4,140	6.7	1,627	2.6	1,312	2.1	61,545
	Women	45	4.2	226	21.0	337	31.3	170	15.8	95	8.8	26	2.4	20	1.8	7	0.7	3	0.3	3	0.3	1,076
Biological Scientists	Total	1,190	2.2	6,845	12.4	10,486	18.5	10,226	18.5	6,529	11.8	4,791	8.7	3,561	6.5	2,626	4.8	1,041	1.9	676	1.2	55,205
	Women	396	3.7	2,015	19.0	2,602	24.5	1,864	17.5	947	8.9	693	6.5	343	3.2	236	2.2	134	1.3	102	1.0	10,626
Agricultural Scientists	Total	172	1.2	1,231	8.5	2,245	15.4	2,309	15.9	1,588	10.9	1,767	12.2	1,239	8.6	1,243	8.5	516	3.6	218	1.5	14,536
	Women	41	6.2	192	29.1	202	7.9	52	5.8	38	4.1	27	1.1	7	0.3	2	0.8	5	0.8	+	-	660
Medical Scientists	Total	391	1.7	2,290	9.9	3,683	16.0	3,948	17.1	2,653	11.5	2,252	9.8	1,455	6.3	1,456	6.3	613	2.6	356	1.5	23,061
	Women	140	2.8	620	12.5	937	19.0	892	19.0	562	11.4	470	9.5	278	5.6	177	3.6	101	2.0	40	0.8	4,943
Psychologists	Total	453	1.0	4,647	10.0	10,425	22.4	8,434	18.1	4,714	10.1	3,839	8.2	3,045	6.5	2,648	5.7	830	1.8	409	0.9	46,645
	Women	253	1.8	2,142	15.7	3,920	28.6	2,298	16.7	1,216	8.9	831	6.1	446	3.2	313	2.3	133	1.0	123	0.9	13,683
Economists	Total	117	0.7	890	5.2	2,608	15.4	2,868	16.9	2,631	15.5	1,177	6.9	1,422	8.4	956	5.6	681	4.0	319	1.9	16,958
	Women	3	0.2	179	12.5	351	24.6	316	22.1	183	12.8	59	4.1	42	2.9	53	3.7	26	1.8	25	1.7	1,429
Sociologists/ Anthropologists	Total	134	1.1	899	7.5	1,858	15.4	2,609	21.6	1,646	13.7	1,257	10.4	784	6.5	556	4.6	209	1.7	140	1.2	12,056
	Women	112	3.2	446	12.8	779	22.3	637	18.3	467	13.4	190	5.4	99	2.8	56	1.6	37	1.1	36	1.0	3,490
Other Social Scientists	Total	204	0.7	1,605	5.3	4,971	16.4	5,534	18.3	4,410	14.5	2,851	9.4	2,375	7.8	1,525	5.0	686	2.3	598	2.0	30,318
	Women	37	0.7	585	11.4	1,326	25.8	1,122	21.8	532	10.3	246	4.8	199	3.9	91	1.8	37	0.7	23	0.4	5,149

* Total includes those for whom no age was reported. Percentages are calculated on the total.

+ no cases reported.

SOURCE: Science, Engineering and Humanities Doctorates in the United States: 1983 Profile, National Research Council, 1984

TABLE 4-11

SEX, RACE AND CITIZENSHIP OF U.S. DOCTORATES BY FIELD, 1983

Demographic Characteristics	All Fields	Field of Doctorate										
		Math	Comp Sci	Phys Astrn	Chem	Earth/ Envir	Engr	Agric	Med	Biol	Psych	Social Sci
Total Population (N)	387,300	19,600	2,600	30,300	50,000	12,900	57,500	18,900	14,700	69,500	51,300	60,000
	%	%	%	%	%	%	%	%	%	%	%	%
Sex												
Male	86.4	91.2	91.0	96.7	92.1	94.1	98.7	95.5	77.3	80.0	70.1	81.6
Female	13.6	8.8	9.0	3.3	7.9	5.9	1.3	4.5	22.7	20.0	29.9	18.4
Racial/Ethnic Group												
White	87.9	87.9	89.6	88.5	87.2	93.0	78.2	89.2	86.9	89.6	93.5	89.0
Minority Group	10.8	10.3	9.4	9.8	11.6	6.1	20.5	9.4	11.7	9.0	5.2	9.5
Hispanic	1.4	1.4	0.7	1.0	1.6	0.9	1.5	1.9	2.0	1.1	1.6	1.5
Black	1.3	0.9	0.4	1.0	1.0	0.3	0.6	0.7	1.8	1.2	2.0	2.5
Asian	7.9	7.9	8.1	7.6	9.0	4.8	18.3	6.6	7.7	6.6	1.4	5.4
American Indian	0.1	0.1	0.2	0.1	0.1	0.1		0.2	0.1	0.1	0.1	0.2
Other			0.1					0.1		0.1		0.1
No Report	1.3	1.8	0.9	1.7	1.2	0.9	1.2	1.2	1.5	1.3	1.3	1.5
Citizenship												
U.S.	94.3	93.9	89.0	92.2	94.8	94.0	88.8	95.0	94.9	96.0	98.5	94.7
Native	84.3	82.2	81.2	81.1	82.4	85.9	72.1	88.5	85.2	87.3	93.8	86.3
Naturalized	9.6	11.5	7.8	11.0	11.9	8.0	16.3	6.4	9.2	8.2	4.2	7.6
Unspecified	0.4	0.1		0.2	0.5	0.1	0.4	0.1	0.5	0.5	0.5	0.8
Non-U.S.	5.7	6.1	11.0	7.8	5.2	5.9	11.2	5.0	5.1	3.9	1.4	5.3
Immigrant	4.7	4.4	9.1	6.2	4.6	5.1	9.8	3.5	4.6	3.0	1.0	4.1
Non-Immigrant	0.7	1.0	1.5	1.1	0.4	0.6	1.0	1.4	0.4	0.5	0.3	0.9
No Report										0.1	0.1	0.1

Demographic Characteristics	All Fields	Field of Doctorate								
		Hist	Art Hist	Music	Speech/ Theater	Phil	Eng/ Amer Lang & Lit	Class Lang & Lit	Modern Lang & Lit	Other Humn
Total Population (N)	85,200	20,400	2,400	5,900	3,700	6,500	22,800	1,900	15,100	6,500
	%	%	%	%	%	%	%	%	%	%
Sex										
Male	71.5	83.4	51.2	79.1	77.5	85.4	66.2	70.7	58.4	67.3
Female	28.5	16.6	48.8	20.9	22.5	14.6	33.8	29.3	41.6	32.7
Racial/Ethnic Group										
White	91.5	91.9	94.2	92.7	93.4	93.3	95.1	95.5	84.0	88.8
Minority Group	6.2	5.2	4.0	5.0	3.1	5.0	3.4	1.5	13.4	9.0
Hispanic	2.9	1.7	1.1	0.9	0.1	1.6	1.1	0.5	10.2	1.5
Black	1.6	1.8	0.9	2.3	2.2	0.6	1.5	0.9	1.2	2.6
Asian	1.6	1.6	1.9	1.5	0.4	2.5	0.7	0.1	1.9	4.8
American Indian	0.1	0.1	0.2	0.3	0.5	0.3	0.1		0.2	
Other/No Report	2.3	2.9	1.8	2.3	3.5	1.7	1.5	3.0	2.6	2.3
Citizenship										
U.S.	96.9	98.3	94.3	98.6	97.7	97.1	98.8	97.8	92.4	95.2
Native	88.9	91.6	87.3	94.7	93.7	90.0	95.9	91.2	71.7	86.2
Naturalized	7.1	5.5	6.1	3.2	3.0	6.2	2.5	5.6	19.3	7.4
Unspecified	1.0	1.2	0.8	0.6	1.1	0.9	0.4	1.0	1.4	1.6
Non-U.S.#	3.0	1.6	5.5	1.4	1.8	2.9	1.1	2.2	7.6	4.8
No Report	0.1	0.1	0.2		0.5				0.1	

#In view of the lack of a comprehensive sampling frame for foreign-earned Ph.D.s in the United States, the number of humanities Ph.D.s who are foreign citizens may be somewhat underestimated.

SOURCE: SMC estimates for 1958-71 based on data by Adolph Wilburn. Current estimates by SMC based on Degree Data from the National Research Council.

TABLE 4-12

ESTIMATED PROPORTIONS OF BLACKS AMONG U.S. DOCTORATES AWARDED 1958-83

FIELD	Total	% of Total	Black	% of Black	Blacks as % of Total
Physical Sci. & Mathematics	98,518	16.8	920	6.0	0.93
Engineering	50,329	8.6	282	1.8	0.56
Life Sciences	91,460	15.6	1,330	8.7	1.45
Social Sciences	114,254	19.5	2,774	18.1	2.43
Arts & Humanities	82,230	14.0	1,409	9.2	1.71
Education	124,218	21.2	7,886	51.6	6.35
Professional Fields	25,527	4.4	692	4.5	2.71
TOTAL, ALL FIELDS	586,207	100.0	15,295	100.0	2.61

Note: In years after 1971, only U.S. Citizens and Permanent Visa residents have been counted. Earlier years include total doctorates awarded.

SOURCE: Science, Engineering and Humanities Doctorates in the U.S., 1983 Profile, National Research Council, 1985

TABLE 4-13

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND EMPLOYMENT STATUS, 1983

FIELD OF Ph.D.	TOTAL			LABOR FORCE			LABOR FORCE PARTICIPATION RATES			UNEMPLOYMENT RATES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
All Fields	387,300	334,600	52,700	365,400	317,000	48,400	94.3	94.7	91.8	1.0	0.8	2.6
Math	19,600	17,900	1,700	18,700	17,100	1,600	95.4	95.5	94.1	0.6	0.6	0.4
Computer Sciences	2,600	2,400	200	2,500	2,300	200	96.1	95.8	100.0			
Physics/Astronomy	30,300	29,300	1,00	29,100	28,200	900	96.0	96.2	90.0	0.7	0.7	1.7
Chemistry	50,000	46,100	3,900	46,600	43,000	3,600	93.2	93.3	92.3	1.2	1.1	2.7
Earth/Environ. Sci.	12,900	12,100	800	12,300	11,600	700	95.3	95.9	87.5	0.8	0.6	3.8
Engineering	57,500	56,800	700	55,600	55,000	700	96.7	96.8	100.0	0.5	0.5	2.0
Agriculture Sciences	18,900	18,000	900	17,400	16,600	700	92.1	92.2	77.8	0.8	0.7	4.5
Medical Sciences	14,700	11,400	3,300	13,800	10,700	3,100	93.9	93.9	93.9	0.8	0.7	1.2
Biological Sciences	69,500	55,600	13,900	64,000	51,700	12,400	92.1	93.0	89.2	1.5	1.0	3.6
Psychology	51,300	36,000	15,300	48,800	34,500	14,300	95.1	95.8	93.5	1.1	0.9	1.5
Social Sciences	60,000	49,000	11,000	56,500	46,400	10,200	94.2	94.7	92.7	1.2	0.6	3.6

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1983, National Science Foundation, NSF 85-303

TABLE 4-14

EMPLOYED DOCTORATES BY FIELD, WORK ACTIVITY, EMPLOYMENT SECTOR AND SEX, 1983

FIELD	Total Employed**			Business Industry			Educational Institutions			Hospitals and Clinics			Non-Profit Organizations			Fed. Govt. & Military/Comm. Corps			State and Other Government		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
TOTAL ALL FIELDS	369,320	48,826	13.2	113,463	10,191	9.0	196,050	29,316	15.0	10,435	2,569	24.6	11,894	2,344	19.7	27,883	2,514	9.0	7,717	1,681	21.8
ALL SCIENTISTS	307,775	47,750	15.5	78,963	9,558	12.1	175,730	29,000	16.5	10,428	2,569	24.6	9,973	2,318	23.2	23,616	2,435	10.3	7,334	1,664	22.7
Chemists	41,298	3,451	8.4	22,525	1,242	5.5	15,037	1,731	11.5	398	38	9.5	818	155	18.9	2,149	207	9.6	193	56	29.0
Physicists/Astron.	22,688	724	3.2	6,223	185	3.0	12,894	421	3.3	161	3	1.9	933	38	4.1	2,363	69	2.9	53	5	9.4
Mathematicians	13,589	1,118	8.2	1,512	96	6.3	11,365	961	8.5	•	•	•	106	24	22.6	532	34	6.4	21	3	14.3
Statisticians	2,790	297	10.6	515	62	12.0	1,879	204	10.9	•	•	•	105	9	8.6	291	22	7.6	•	•	
Computer/Info. Spec.	12,164	1,266	10.1	6,819	739	10.8	4,031	354	8.8	70	8	11.4	345	30	8.7	517	32	6.2	336	101	30.0
Earth Scientists	12,523	637	5.1	4,596	241	5.2	4,658	229	4.9	•	•	•	271	15	5.5	2,222	119	5.4	737	29	3.9
Oceanographers	1,742	187	10.7	217	13	6.0	1,082	114	10.5	•	•	•	95	25	26.3	282	28	9.9	58	7	12.1
Atmospheric Sci.	2,202	90	4.1	341	16	4.7	942	45	4.8	•	•	•	189	12	6.3	706	15	2.1	24	2	8.3
Biological Sci.	55,205	10,626	19.2	7,730	1,008	13.0	38,046	7,930	20.8	1,296	274	21.1	2,344	575	24.5	4,836	659	13.6	761	169	22.2
Agricultural Sci.	14,536	660	4.5	3,583	221	6.2	8,189	329	4.0	5	3	60.0	305	22	7.2	2,036	70	3.4	295	15	5.1
Medical Scientists	23,061	4,943	21.4	5,131	623	12.1	12,671	3,198	25.2	2,305	565	24.5	609	120	19.7	1,627	217	13.3	654	211	32.3
Psychologists	46,645	13,683	29.3	13,020	4,080	31.3	22,182	6,406	28.9	6,042	1,602	26.5	1,773	666	37.5	1,379	209	15.2	2,148	664	30.9
Economists	16,958	1,429	8.4	2,779	213	7.7	11,362	888	7.8	15	15	100.0	219	29	13.2	1,697	214	12.6	233	42	18.0
Sociol./Anthrop.	12,056	3,490	28.9	801	281	35.1	10,369	2,866	27.6	37	37	100.0	431	146	33.9	148	91	61.5	209	43	20.6
Other Social Sci.	30,318	5,149	17.0	3,171	538	17.0	21,023	3,324	16.3	99	24	24.2	1,430	452	31.6	2,831	449	15.9	1,612	317	19.7
ENGINEERS	61,545	1,076	1.7	34,500	633	1.8	20,320	316	1.6	7	•	-	1,921	26	1.4	4,267	79	1.9	383	17	4.4

• No cases reported. **Includes those who did not report employment sector

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1983, National Science Foundation, NSF 85-303

TABLE 4-15

MINORITY DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE AND EMPLOYMENT SECTOR, 1983

	BUSINESS & INDUSTRY			EDUCATIONAL INST.			GOVERNMENT**			OTHER			TOTAL+		
FIELD	Black	Indian	Asian	Black	Indian	Asian	Bl.	Ind.	Asian	Bl.	Ind.	Asian	Black	Indian	Asian
ALL FIELDS	675	69	13,431	3,329	294	12,779	544	35	1,858	384	17	1,581	4,948	418	29,740
Physical Scientists	**183**	**4**	**2,988**	**423**	**63**	**2,034**	**76**	*	**442**	**8**	*	**158**	**690**	**67**	**5,684**
Chemists	126	4	2,487	279	38		41	*	279	2	*	108	448	42	3,865
Phys/Astron.	57	*	501	144	25	1,109	35	*	156	6	*	50	242	25	1,819
Math Scientists	**21**	**2**	**273**	**139**	**4**	**1,034**	**13**	*	**69**	**5**	*	*	**178**	**6**	**1,378**
Mathematicians	19	2	203	123	2	738	9	*	33	2	*	2	153	4	976
Statisticians	2	*	70	16	2	296	4	*	36	3	*	*	25	2	402
Computer Specialists	**7**	**3**	**578**	**25**	*	**288**	**7**	*	**42**	**4**	*	**36**	**43**	**3**	**944**
Engineers															
Environmental Sci.	**15**	*	**351**	**13**	**1**	**266**	**5**	**10**	**114**	*	*	**34**	**33**	**11**	**770**
Earth Scientists	15	*	333	9	1	192	5	8	74	*	*	23	29	9	627
Oceanographers	*	*	*	2	*	37	*	*	18	*	*	6	2	*	61
Atmospheric Sci.	*	*	18	2	*	37	*	2	22	*	*	5	2	2	82
Life Scientists	**82**	**14**	**1,319**	**784**	**58**	**4,288**	**196**	**2**	**426**	**80**	**10**	**693**	**1,142**	**84**	**6,750**
Biological Sci.	26	2	702	497	23	2,801	99	*	270	20	8	436	642	33	4,218
Agricultural Sci.	6	3	281	39	27	443	3	2	69	15	2	19	63	34	812
Medical Sci.	50	9	336	248	8	1,044	94	*	87	45	*	239	437	17	1,720
Psychologists	**141**	**26**	**90**	**578**	**35**	**328**	**99**	**2**	**66**	**157**	**7**	**156**	**983**	**73**	**640**
Social Scientists	**89**	**2**	**543**	**1,170**	**119**	**2,123**	**107**	**14**	**243**	*	**95**	**184**	**1,469**	**135**	**3,093**
Economists	11	*	270	232	60	774	18	*	113	29	*	128	290	60	1,285
Sociol/Anthrop.	4	2	15	329	32	388	10	*	7	27	*	6	378	34	416
Other Social Sci.	74	*	249	609	27	970	79	14	123	39	*	50	801	41	1,392

+ Includes some whose employment sector was not reported.

* No reported cases. ** Includes Federal, State and Local Government, plus military/comm. corps

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1983 National Science Foundation, NSF 85-303

TABLE 4-16

EMPLOYED DOCTORATES BY FIELD, WORK ACTIVITY AND SEX, 1983

FIELD	Total Employed			Research & Development			Management or Administration			Teaching			Consulting			Sales/Professional Services			Other		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
TOTAL ALL FIELDS	**369,320**	**48,826**	**13.2**	**124,788**	**14,638**	**11.7**	**61,813**	**5,233**	**8.5**	**108,236**	**15,536**	**14.4**	**12,746**	**1,169**	**9.2**	**29,820**	**7,955**	**26.7**	**24,163**	**3,165**	**13.1**
ALL SCIENTISTS	**307,775**	**47,750**	**15.5**	**100,042**	**14,046**	**14.1**	**46,321**	**5,091**	**11.0**	**96,403**	**15,360**	**15.9**	**8,999**	**1,147**	**12.7**	**28,568**	**7,937**	**27.8**	**20,435**	**3,050**	**14.9**
Chemists	41,298	3,451	8.4	17,985	1,556	8.6	8,258	363	4.4	8,995	1,011	11.2	654	30	4.6	1,173	130	11.1	3,539	284	8.0
Physicists/Astron.	22,688	724	3.2	11,068	385	3.5	3,587	75	2.1	5,657	191	3.4	271	6	2.2	468	10	2.1	989	33	3.3
Mathematicians	13,589	1,118	8.2	2,809	185	6.6	1,128	64	5.7	8,324	777	9.3	296	35	11.8	237	13	5.5	247	18	7.3
Statisticians	2,790	297	10.6	594	90	15.2	368	14	3.8	1,377	143	10.4	303	18	5.9	24	7	29.2	80	20	25.0
Computer/info. Spec.	12,164	1,266	10.1	5,400	479	8.9	2,052	232	11.3	2,361	177	15.0	678	58	8.6	375	82	21.9	1,181	197	16.7
Earth Scientists	12,523	637	5.1	4,355	239	5.5	2,480	72	2.9	2,918	144	4.9	1,073	52	4.8	199	19	9.5	1,269	96	7.6
Oceanographers	1,742	187	10.7	1,031	116	11.2	311	38	12.2	188	13	6.9	46	9	19.6	43	2	4.6	72	9	12.5
Atmospheric Sci.	2,202	90	4.1	1,343	72	5.4	338	8	2.4	329	10	3.0	79	*	-	*	*		104	*	-
Biological Sci.	55,205	10,626	19.2	28,080	5,890	21.0	5,875	610	10.4	15,156	3,006	19.8	886	108	12.2	1,139	234	20.5	2,504	510	20.4
Agricultural Sci.	14,536	660	4.5	6,213	286	4.6	2,833	83	2.9	2,489	103	4.1	465	8	1.7	617	34	5.5	1,498	109	7.3
Medical Scientists	23,061	4,943	21.4	6,730	1,417	21.0	4,263	837	19.6	4,807	1,344	27.9	630	138	21.9	4,467	766	17.1	1,564	390	25.2
Psychologists	46,645	13,683	29.3	5,017	1,354	27.0	5,608	1,196	21.3	12,708	3,450	27.1	2,084	495	23.8	18,488	6,376	34.5	2,081	481	23.1
Economists	16,958	1,429	8.4	3,911	390	10.0	2,443	149	6.1	7,803	670	8.6	781	107	13.7	387	27	6.9	1,393	81	5.8
Sociol./Anthrop.	12,056	3,490	28.9	1,823	669	36.7	1,228	355	28.9	7,565	2,075	27.4	141	20	14.2	243	84	34.6	730	218	29.9
Other Social Sci.	30,318	5,149	17.0	3,684	918	24.9	5,549	995	17.9	15,726	2,246	14.3	612	63	10.3	708	153	21.6	3,184	604	19.0
ENGINEERS	**61,545**	**1,076**	**1.7**	**24,746**	**592**	**2.4**	**15,492**	**142**	**0.9**	**11,833**	**176**	**1.5**	**3,747**	**22**	**0.6**	**1,252**	**18**	**1.4**	**3,728**	**115**	**3.1**

* No cases reported.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, NSF 86-301, January 1986

TABLE 4-17

EMPLOYED U.S. SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1984

FIELD	SEX	TOTAL No. in 1984	TOTAL % Women	WHITE No. in 1984	WHITE %	BLACK No. in 1984	BLACK %	ASIAN No. in 1984	ASIAN %	AM. INDIAN No. in 1984	AM. INDIAN %	HISPANIC† No. in 1984	HISPANIC† %
ALL FIELDS	Total	3,995,500		3,641,200	91.1	90,500	2.3	106,500	4.7	20,400	0.5	86,600	2.2
	Women	512,600	12.8	452,200	88.2	22,900	4.5	27,000	5.3	1,500	0.3	15,200	3.0
ALL SCIENTISTS	Total	1,781,400		1,623,800	91.2	53,400	3.0	69,100	3.9	8,600	0.5	38,800	2.2
	Women	438,100	24.6	388,800	88.7	19,800	4.5	20,900	4.8	1,300	0.3	12,700	2.9
PHYSICAL SCIENTISTS	Total	254,100		230,700	90.8	6,100	2.4	12,500	4.9	1,100	0.4	4,300	1.7
	Women	28,300	11.1	24,000	84.8	1,200	4.2	2,800	9.9	*	-	800	2.8
Chemists	Total	168,600		151,500	89.9	5,300	3.1	8,500	5.0	900	0.5	3,200	1.9
	Women	22,300	13.2										
Physicists/ Astronomers	Total	61,200		56,400	92.2	600	1.0	2,800	4.5	200	0.3	800	1.3
	Women	3,000	4.9										
Other Physical Scientists	Total	24,300		22,800	93.8	200	0.8	1,100	4.5	*	-	300	1.2
	Women	3,100	12.8										
MATHEMATICAL SCIENTISTS	Total	100,400		88,900	88.5	4,700	4.7	4,700	4.7	400	0.4	2,700	2.7
	Women	21,900	21.8	19,300	88.1	1,700	7.8	600	2.7	*	-	700	3.2
Mathematicians	Total	83,900		74,100	88.3	4,300	5.1	3,800	4.5	200	0.2	2,400	2.9
	Women	17,900	21.3										
Statisticians	Total	16,500		14,800	89.7	400	2.4	900	5.5	200	1.2	400	2.4
	Women	4,000	24.2										
Computer Specialists	Total	436,800		392,600	89.9	12,100	2.8	24,600	5.6	1,800	0.4	8,200	1.9
	Women	114,100	26.1	99,600	87.3	5,600	4.9	7,200	6.3	100	0.1	3,100	2.7
ENVIRONMENTAL SCIENTISTS	Total	98,100		94,200	96.0	600	0.6	1,800	1.8	300	0.3	1,800	1.8
	Women	10,300	10.5	9,900	96.1	100	1.0	100	1.0	*	-	200	1.9
Earth Scientists	Total	82,300		79,200	96.2	400	0.5	1,300	1.5	200	0.2	1,500	1.8
	Women	8,800	10.7										
Oceanographers	Total	3,200		3,000	93.8	*		100	3.1	*		100	3.1
	Women	500	15.6										
Atmospheric Scientists	Total	12,600		12,00	95.2	100	0.8	400	3.2	*		300	2.4
	Women	1,000	7.9										
LIFE SCIENTISTS	Total	353,300		329,300	93.2	6,700	1.9	10,400	2.9	2,100	0.6	7,300	2.1
	Women	82,600	23.4	73,700	89.2	2,100	2.5	4,200	5.1	500	0.6	2,700	3.3
Biological Scientists	Total	236,600		218,900	92.5	5,600	2.4	7,600	3.2	900	0.4	5,600	2.4
	Women	60,400	25.5										
Agricultural Scientists	Total	88,700		84,200	94.9	800	0.9	1,700	1.9	1,100	1.2	1,300	1.5
	Women	16,300	18.4										
Medical Scientists	Total	27,900		26,300	94.3	300	1.1	1,100	3.9	100	0.4	400	1.4
	Women	5,800	20.8										
PSYCHOLOGISTS	Total	209,500	42.2	196,000	93.6	7,300	3.5	2,000	1.0	1,800	1.9	4,200	2.0
	Women	88,400		81,600	92.3	4,300	4.9	1,200	1.4	300	0.3	2,200	2.5
SOCIAL SCIENTISTS	Total	329,200		292,100	88.7	15,900	4.8	13,100	4.0	1,200	0.4	10,200	3.1
	Women	92,400	28.1	80,600	87.2	4,800	5.2	4,800	5.2	200	0.2	2,900	3.1
Economists	Total	125,600		113,000	90.0	4,400	3.5	5,600	4.5	700	0.6	2,500	2.0
	Women	18,600	14.9										
Sociologists/ Anthropologists	Total	77,700		67,000	86.2	4,700	6.0	3,600	4.6	200	0.3	4,300	5.5
	Women	32,000	41.2										
Other Social Scientists	Total	125,900		112,100	89.0	6,800	5.4	3,900	3.1	200	0.2	3,400	2.7
	Women	41,800	33.2										
ENGINEERS	Total	2,214,000		2,017,400	91.1	37,100	1.7	117,500	5.3	11,700	0.5	47,800	2.2
	Women	74,500	3.4	63,500	85.2	3,100	4.2	6,100	8.2	200	0.3	2,600	3.5

* Too few cases to report. NOTE: Detail may not add due to rounding.

† Includes members of all racial groups.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1986

TABLE 4-18

1984 RATES OF LABOR FORCE PARTICIPATION, UNEMPLOYMENT, S/E EMPLOYMENT, UNDER-EMPLOYMENT AND UNDER-UTILIZATION BY FIELD, SEX AND RACIAL/ETHNIC GROUP

	WHITE		BLACK		ASIAN		NAT. AMERICAN		HISPANIC		TOTAL	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
TOTAL SCIENTISTS/ENGINEERS												
Participation[1]	95.7	94.1	98.7	96.8	97.1	93.2	97.8	96.1	96.3	94.6	95.8	94.3
Unemployment[2]	1.2	3.4	2.0	4.7	2.5	1.6	1.9	18.0	2.0	2.7	1.3	3.4
S/E Employment[3]	88.2	77.0	84.7	71.0	92.1	83.1	78.8	71.4	81.9	72.6	88.2	77.0
Under-employment[4]	1.8	7.4	3.6	15.7	1.5	3.6	1.5	20.0	2.5	12.3	1.8	7.8
Under-utilization[5]	3.0	10.5	5.4	19.6	3.9	5.1	3.4	34.4	4.5	14.6	3.1	10.9
PHYSICAL SCIENTISTS												
Participation	94.8	92.9	98.8	94.5	94.9	84.8	84.1	100.0	92.4	85.3	94.9	92.1
Unemployment	1.4	3.9	5.5	6.0	2.6	1.3	*	*	3.4	2.4	1.6	3.8
S/E Employment	92.3	92.6	78.0	83.6	93.3	89.7	100.0	100.0	90.1	98.2	92.1	91.8
Under-employment	1.8	2.5	1.8	10.3	6.2	3.2	*	*	2.1	4.6	2.0	3.1
Under-utilization	3.1	6.3	7.2	15.7	8.6	4.4	*	*	5.5	6.9	3.5	6.7
MATH SCIENTISTS												
Participation	96.2	92.3	98.0	98.6	95.9	91.9	100.0	100.0	100.0	100.0	96.2	92.8
Unemployment	1.4	2.6	*	6.7	10.6	*	*	*	*	*	2.0	2.8
S/E Employment	86.0	85.4	89.5	96.8	95.8	91.1	100.0	19.6	96.9	92.1	86.9	86.0
Under-employment	1.9	5.9	5.0	1.1	1.4	6.0	*	80.4	*	7.9	2.0	6.1
Under-utilization	3.3	8.3	5.0	7.7	11.9	6.0	*	80.4	*	7.9	3.9	8.8
COMPUTER SPECIALISTS												
Participation	99.6	97.3	100.0	98.8	99.0	96.4	100.0	100.0	89.9	93.8	99.4	97.3
Unemployment	0.4	0.8	1.2	1.7	1.0	0.5	*	*	*	*	0.5	0.8
S/E Employment	77.8	77.3	78.9	84.2	86.9	79.2	17.6	100.0	63.6	70.6	78.0	77.8
Under-employment	2.1	1.7	3.6	7.9	1.9	5.4	*	*	4.6	5.2	2.2	2.3
Under-utilization	2.5	2.6	4.8	9.4	2.8	5.9	*	*	4.6	5.2	2.6	3.1
ENVIRONMENTAL SCIENTISTS												
Participation	96.3	92.4	82.8	100.0	98.8	100.0	93.0	100.0	96.3	100.0	96.3	92.6
Unemployment	2.6	7.3	1.1	7.9	*	*	*	*	4.7	*	2.6	7.1
S/E Employment	91.8	87.8	98.3	100.0	98.3	81.6	100.0	100.0	97.1	91.0	92.0	88.1
Under-employment	3.1	10.5	1.7	*	3.6	*	*	*	1.1	10.1	3.2	10.1
Under-utilization	3.6	17.0	2.8	7.9	3.6	*	*	*	5.7	10.1	5.7	16.5
LIFE SCIENTISTS												
Participation	95.2	90.6	97.2	90.9	93.2	91.9	100.0	100.0	92.3	92.4	95.2	90.9
Unemployment	1.5	4.3	1.2	0.6	3.0	4.5	*	*	1.8	0.8	1.5	4.4
S/E Employment	85.3	82.7	78.8	87.4	94.4	83.0	76.1	11.7	77.1	80.1	83.5	82.5
Under-employment	3.7	8.9	3.7	9.4	2.6	9.3	*	*	6.3	15.8	3.7	9.0
Under-utilization	5.1	12.8	4.8	9.9	5.5	13.5	*	*	8.0	16.6	5.1	13.0
PSYCHOLOGISTS												
Participation	97.2	95.2	16.6	99.0	89.4	98.2	100.0	100.0	89.2	100.0	97.0	95.4
Unemployment	2.0	3.2	3.1	2.8	*	1.8	*	*	3.2	1.0	2.1	3.1
S/E Employment	76.9	67.4	86.3	58.2	87.2	62.3	73.1	100.0	30.6	33.4	76.7	66.8
Under-employment	4.0	10.7	4.4	27.1	3.6	1.8	14.5	42.2	20.3	23.3	4.4	11.8
Under-utilization	6.0	13.6	7.3	29.1	3.6	3.6	14.5	42.2	22.8	24.1	6.3	14.6
SOCIAL SCIENTISTS												
Participation	96.2	93.5	99.1	95.0	99.1	92.2	100.0	100.0	93.6	92.7	96.4	93.7
Unemployment	2.7	5.9	1.6	8.4	1.1	*	*	59.3	1.0	8.9	2.5	5.9
S/E Employment	64.5	60.0	63.6	38.8	57.0	70.1	38.1	100.0	49.6	66.1	93.7	59.4
Under-employment	4.6	15.3	7.6	29.2	0.9	*	2.7	57.8	4.1	20.3	4.6	15.8
Under-utilization	7.1	20.3	9.2	35.2	2.0	*	2.7	82.9	5.1	27.4	7.0	20.8
ENGINEERS												
Participation	95.1	94.6	99.0	97.2	97.2	94.7	93.3	78.2	98.4	97.2	95.3	94.7
Unemployment	1.0	2.8	1.8	7.2	2.5	2.1	3.1	10.3	2.3	2.6	1.2	2.9
S/E Employment	93.0	93.9	93.8	84.1	95.1	98.4	88.9	100.0	90.0	93.8	93.1	93.9
Under-employment	1.0	1.7	2.3	8.0	1.0	1.0	0.4	*	1.1	2.1	1.0	1.9
Under-utilization	2.0	4.5	4.1	14.6	3.4	3.1	3.5	10.3	3.3	4.7	2.2	4.7

[1] Ratio of those employed plus unemployed but seeking, to the total population.
[2] Ratio of those employed but seeking to total labor force.
[3] Ratio of those holding jobs in science or engineering to total employed graduates in S/E.
[4] Ratio of those working part time but seeking full time or those in non-S/E job who prefer S/E to total employment.
[5] Proportion of the labor force that is total of unemployed but seeking plus working part time but seeking full time, plus those involuntarily in non-S/E employment.

* Too few cases to estimate

SOURCE: Series of Earned Degrees Conferred, 1948-1983, National Center for Education Statistics; and Science and Engineering Personnel: An Overview; National Science Foundation, 1985

TABLE 4-19

NUMBER OF BACHELOR'S DEGREES GRANTED, 1948-1983 COMPARED WITH 1983 POPULATION OF SCIENTISTS AND ENGINEERS, BY FIELD AND SEX

FIELD	BACHELOR'S DEGREES, 1948-1983				SCIENTISTS & ENGINEERS, 1983				S/E's in 1983 as a % of B.S. Degrees Granted 1948-1983	
	Total	Men	Women	% W	Total	Men	Women	% W	Men	Women
Physical/Environmental Sciences	564,954	475,147	89,807	15.9	235,900	212,700	23,200	9.8	44.8	25.8
Math/Statistical/Computer Science	546,864	354,837	187,327	34.3	435,800	309,400	126,400	29.0	85.9	67.5
Biological/Agricultural Science	1,298,471	952,433	346,038	26.7	339,300	265,700	73,600	21.7	27.9	21.3
Psychology	1,203,677	760,301	443,376	36.8	143,500	84,200	59,300	41.3	11.1	13.4
Social Sciences*	2,115,233	1,499,641	615,542	29.1	247,600	174,800	72,800	29.4	11.7	11.8
Engineering	1,590,803	1,434,483	70,320	4.7	1,940,000	1,876,700	63,300	3.3	125.1	90.0
Total Science & Engineering	7,239,002	5,486,592	1,752,410	24.2	3,465,900	3,026,100	439,800	12.7	55.2	25.1

*Anthropology, Sociology, Economics and Political Science

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1986

TABLE 1-20

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE, ETHNICITY AND TYPE OF EMPLOYER, 1984

	TOTAL EMPLOYED				BUSINESS & INDUSTRY			EDUCATIONAL INST.			FEDERAL GOVERNMENT		
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	%	TOTAL	WOMEN	%	TOTAL	WOMEN	%
Total Scientists/Engineers	3,995,500	512,600	12.8		2,512,500	256,400	62.9	537,000	116,500	13.4	307,100	31,500	7.7
White	3,641,200	452,200	12.4	91.1	2,299,700	222,900	63.2	486,500	105,100	13.4	276,700	27,200	7.6
Black	90,500	22,900	25.3	2.3	49,600	12,900	54.8	14,400	3,400	15.9	11,900	2,500	13.1
Asian	186,500	27,000	14.5	4.7	116,900	15,200	62.7	28,100	5,800	15.1	13,000	1,500	7.0
Native American	20,400	1,300	7.4	0.5	12,200	600	59.8	1,700	700	8.3	1,300	*	6.4
Hispanic**	86,600	15,200	17.6	2.2	51,000	7,600	58.9	9,900	3,300	11.4	6,000	1,000	6.9
Total Scientists	1,781,400	438,100	24.6		840,300	198,300	47.2	454,900	112,300	25.5	139,900	26,300	7.9
White	1,623,800	388,800	23.9	91.2	769,700	175,300	47.2	416,400	101,900	25.6	127,100	22,900	7.9
Black	53,400	19,800	37.1	3.0	23,600	10,500	44.7	12,500	3,100	23.4	6,600	2,200	12.4
Asian	69,100	20,900	30.2	3.9	34,000	10,500	49.2	19,700	5,200	28.5	4,100	1,100	5.9
Native American	8,600	1,300	15.1	0.5	3,800	300	44.2	1,600	700	18.6	500	*	5.8
Hispanic	38,800	12,700	32.7	2.2	17,900	5,800	46.1	8,700	3,200	22.4	2,000	600	5.2
Physical Scientists	254,100	28,300	11.1		138,700	15,500	54.6	61,200	6,900	24.1	24,500	1,900	9.6
White	230,700	24,000	10.4	90.8	125,700	12,800	54.5	56,400	6,200	24.4	22,400	1,600	9.7
Black	6,100	1,200	19.7	2.4	3,300	700	54.1	1,200	100	19.7	800	200	13.1
Asian	12,500	2,800	22.4	4.9	7,100	1,900	56.8	2,900	500	23.2	1,100	100	8.8
Native American	1,100	*		0.4	700	*	63.6	200	*	18.2	*	*	
Hispanic	4,300	800	18.6	1.7	1,700	400	39.5	1,200	200	27.9	400	100	9.3
Mathematical Scientists	100,400	21,900	21.8		39,000	9,800	38.8	46,300	8,700	46.1	8,600	2,100	8.6
White	88,900	19,300	21.7	88.5	35,600	8,300	40.0	40,200	8,000	45.2	7,500	1,900	8.4
Black	4,700	1,700	36.2	4.7	1,500	1,200	31.9	2,400	300	51.1	700	200	14.9
Asian	4,700	600	12.8	4.7	1,100	200	23.4	3,000	200	63.8	200	*	4.3
Native American	400	*		0.4	100	*	25.0	100	*	25.0	200	*	25.0
Hispanic	2,700	700	25.9	2.7	800	200	29.6	1,500	500	55.6	100	*	3.7
Computer Scientists	436,800	114,100	26.1		329,800	82,900	75.5	30,200	9,800	6.9	29,200	8,500	6.7
White	392,600	99,600	25.4	89.9	297,700	72,500	75.8	26,100	9,000	6.6	26,100	7,200	6.6
Black	12,100	5,600	46.3	2.8	8,000	3,400	66.1	1,100	500	9.1	1,800	600	14.9
Asian	24,600	7,200	29.3	5.6	18,000	5,800	73.2	2,600	200	10.6	1,000	600	4.1
Native American	1,800	100	5.6	0.4	1,500	100	83.3	*	*		100	*	5.6
Hispanic	8,200	3,100	37.8	1.9	6,200	2,200	75.6	600	500	7.3	300	200	3.7
Environmental Scientists	98,100	10,300	10.5		47,800	4,700	48.7	15,700	2,000	16.0	14,900	1,700	15.2
White	94,200	9,900	10.5	96.0	46,300	4,500	49.2	14,800	1,900	15.7	14,000	1,700	14.9
Black	600	100	16.7	0.6	100	*	16.7	100	*	16.7	300	*	50.0
Asian	1,800	100	5.6	1.8	600	*	33.3	600	100	33.3	400	*	22.2
Native American	300	*		0.3	*	*		*	*		*	*	
Hispanic	1,800	200	11.1	1.8	900	100	50.0	400	*	22.2	300	*	16.7
Life Scientists	353,300	82,600	23.4		107,800	24,400	30.5	131,100	33,400	37.1	38,700	6,700	11.0
White	329,300	73,700	22.4	93.2	101,300	21,600	30.8	121,800	29,800	37.0	35,600	6,000	10.8
Black	6,700	2,100	31.3	1.9	1,500	400	22.4	2,500	900	37.3	1,300	300	19.4
Asian	10,400	4,200	40.4	2.9	3,300	1,400	31.7	4,400	1,800	42.3	900	300	8.7
Native American	2,100	500	23.8	0.6	200	100	9.5	1,000	300	47.6	200	*	9.5
Hispanic	7,300	2,700	37.0	2.1	2,700	1,000	37.0	2,100	900	28.8	600	*	8.2
Psychologists	209,500	88,400	42.2		47,300	21,000	22.6	75,600	27,600	36.1	5,000	1,200	2.4
White	196,000	81,600	41.6	93.6	43,200	18,900	22.0	72,200	25,700	36.8	4,400	1,000	2.2
Black	7,300	4,300	58.9	3.5	2,100	1,500	28.8	2,000	1,000	27.4	300	200	4.1
Asian	2,000	1,200	60.0	1.0	500	300	25.0	600	400	30.0	100	*	5.0
Native American	1,800	300	16.7	0.9	400	*	22.2	200	200	11.1	*	*	
Hispanic	4,200	2,200	52.4	2.0	1,900	800	45.2	800	600	19.0	100	100	2.4
Social Scientists	329,200	92,400	28.1		129,800	39,900	39.4	94,700	24,000	28.8	19,000	4,200	5.8
White	292,100	80,600	27.6	88.7	115,800	34,700	39.6	84,800	21,200	29.0	17,100	3,400	5.9
Black	15,900	4,800	30.2	4.8	7,000	3,200	44.0	3,200	300	20.1	1,400	700	8.8
Asian	13,100	4,800	36.6	4.0	3,400	900	26.0	5,700	2,100	43.5	400	100	3.1
Native American	1,200	200	16.7	0.4	700	100	58.3	200	100	16.7	100	*	8.3
Hispanic	10,200	2,900	28.4	3.1	3,600	1,200	35.3	2,300	600	22.5	300	100	2.9
Engineers	2,214,100	74,500	3.4		1,672,200	58,200	75.5	82,200	4,100	3.7	167,100	5,200	7.5
White	2,017,400	63,500	3.1	91.1	1,534,100	49,600	76.0	70,200	3,200	3.5	149,600	4,400	7.4
Black	37,100	3,100	8.4	1.7	26,000	2,400	70.1	1,800	200	4.9	5,300	300	14.3
Asian	117,500	6,100	5.2	5.3	82,900	4,700	70.6	8,500	600	7.2	9,000	400	7.7
Native American	11,700	200	1.7	0.5	8,400	200	71.8	100	*	0.9	800	*	6.8
Hispanic	47,800	2,600	5.4	2.2	33,100	1,900	69.2	1,200	*	2.5	4,000	400	8.4

* Too few cases to estimate. ** Includes members of all racial groups.

NOTE: Detail will not add to total employed because racial and ethnic categories are not mutually exclusive; and total employed includes other and no report.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1986

TABLE 4-21

SCIENTISTS AND ENGINEERS BY FIELD, RACE, ETHNIC ORIGIN, SEX AND WORK ACTIVITY, 1984

	TOTAL EMPLOYED*				RESEARCH & DEVELOPMENT			MANAGEMENT (R&D & OTHER)			TEACHING			OTHER+		
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	H %	TOTAL	WOMEN	H %	TOTAL	WOMEN	H %	TOTAL	WOMEN	H %
Total Scientists/Engineers	3,995,500	512,600	12.8		1,129,600	118,600	28.3	1,150,000	94,400	28.8	299,200	62,600	7.5	915,600	142,800	22.9
White	3,641,200	452,200	12.4	91.1	1,013,100	102,700	27.8	1,067,400	82,000	29.3	272,700	57,200	7.5	828,800	124,900	22.8
Black	90,500	22,900	25.3	2.3	20,500	3,600	22.7	25,700	5,200	28.4	9,100	1,500	10.1	24,500	8,200	27.1
Asian	186,500	27,000	14.5	4.7	73,800	9,600	39.6	37,000	5,500	19.9	13,700	2,600	7.3	43,900	7,400	23.5
Native American	20,400	1,500	7.4	0.5	4,200	300	20.6	7,600	400	37.3	800	300	3.9	3,700	200	18.1
Hispanic**	86,600	15,200	17.6	2.2	23,100	3,500	26.7	22,100	2,400	25.5	6,600	2,500	7.6	22,200	4,400	25.6
Total Scientists	1,781,400	438,100	24.6		401,100	89,000	22.5	460,600	83,500	25.9	250,800	59,200	14.1	419,300	119,500	23.5
White	1,625,800	388,800	23.9	91.2	366,600	78,400	22.6	420,300	73,000	25.9	230,200	54,400	14.2	375,600	104,200	23.1
Black	53,400	19,800	37.1	3.0	7,700	2,500	14.4	17,100	4,500	32.0	7,600	1,400	14.2	13,700	7,200	25.7
Asian	69,100	20,900	30.1	3.9	19,900	6,700	28.7	14,200	4,400	20.5	9,900	2,200	14.3	20,600	6,000	29.7
Native American	8,600	1,300	15.1	0.4	1,100	100	12.8	3,400	400	39.5	700	300	8.1	1,400	200	16.3
Hispanic	38,800	12,700	32.7	2.2	6,400	2,400	16.5	9,700	2,100	25.0	5,900	2,500	15.2	10,000	3,500	25.8
Physical Scientists	254,100	28,300	11.1		99,900	11,500	39.3	67,400	2,400	26.5	37,400	4,400	14.7	37,600	7,900	14.8
White	230,700	24,000	10.4	90.8	89,599	9,500	38.8	63,100	2,200	27.4	35,900	4,200	15.6	31,500	6,200	13.7
Black	6,100	1,200	19.7	2.4	1,700	500	27.9	1,700	100	27.9	300	*	4.9	2,100	400	34.4
Asian	12,500	2,800	22.4	4.9	6,600	1,400	52.8	1,800	100	14.4	900	100	7.2	2,900	1,100	23.2
Native American	1,100	*		0.4	400	*	36.4	400	*	36.4	200	*	8.2	100	*	9.1
Hispanic	4,300	800	18.6	1.7	1,600	400	37.2	1,200	100	27.9	600	200	14.0	700	200	16.3
Mathematical Scientists	100,400	21,900	21.8		14,900	2,600	14.8	29,200	6,400	29.1	38,200	7,900	38.0	14,500	3,500	14.4
White	88,900	19,300	21.7	88.5	13,800	2,400	15.5	26,300	5,100	29.6	32,500	7,400	36.6	12,800	3,100	14.4
Black	4,700	1,700	36.2	4.7	400	100	8.5	1,400	1,100	29.8	2,300	300	48.9	500	200	10.6
Asian	4,700	600	12.8	4.7	500	100	10.6	500	100	10.6	2,700	200	57.4	900	200	19.1
Native American	400	*		0.4	*	*		200	*	50.0	100	*	25.0	100	*	25.0
Hispanic	2,700	700	25.9	2.7	400	100	14.8	700	*	25.9	1,400	400	51.8	200	100	7.4
Computer Scientists	436,800	114,100	26.1		81,800	20,100	18.7	78,600	13,000	18.0	14,400	4,900	3.3	226,200	68,700	51.9
White	392,600	99,600	25.4	89.9	73,300	17,100	18.7	71,400	11,600	18.2	13,800	4,700	3.5	200,900	59,400	51.2
Black	12,100	5,600	46.3	2.8	2,100	200	17.4	2,200	800	18.2	200	100	1.6	6,700	4,100	55.4
Asian	24,600	7,200	29.3	5.6	5,800	2,600	23.6	3,900	600	15.8	300	*	1.2	13,800	3,800	56.1
Native American	1,800	100	5.6	0.4	*	*		1,000	*	55.4	*	*		600	100	33.3
Hispanic	8,200	3,100	37.8	1.9	1,200	600	14.6	1,100	200	13.4	500	500	6.1	4,500	1,500	54.9

*Too few cases to estimate. +Includes other and no report. **Includes all racial groups.
Detail will not add to total employed because racial and ethnic categories are not mutually exclusive and total includes other and no report.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1986

TABLE 4-21 continued

SCIENTISTS AND ENGINEERS BY FIELD, RACE, ETHNIC ORIGIN, SEX AND WORK ACTIVITY, 1984

	TOTAL EMPLOYED				RESEARCH & DEVELOPMENT			MANAGEMENT (R&D & Other)			TEACHING			OTHER+		
	TOTAL	WOMEN	% W	% M	TOTAL	WOMEN	W %	TOTAL	WOMEN	W %	TOTAL	WOMEN	W %	TOTAL	WOMEN	W %
Environmental Scientists	98,100	10,300	10.5		35,100	5,000	35.8	17,300	1,100	17.6	7,300	900	7.4	29,700	2,700	30.3
White	94,200	9,900	10.5	96.0	33,500	4,800	35.6	16,500	1,100	17.5	7,000	800	7.4	28,500	2,600	30.3
Black	600	100	16.7	0.6	200	*	33.3	100	*	16.7	*	*		200	*	33.3
Asian	1,800	100	5.6	1.8	900	100	50.0	100	*	5.6	100	*	5.6	500	*	27.8
Native American	300	*		0.3	100	*	33.3	*	*		*	*		100	*	33.3
Hispanic	1,800	200	11.1	1.8	400	*	22.2	200	*	11.1	300	*	16.7	600	*	33.3
Life Scientists	353,300	82,600	23.4		113,400	33,100	32.1	92,000	12,900	26.0	54,400	12,400	15.4	51,900	12,400	14.7
White	329,300	73,700	22.4	93.2	103,800	29,300	31.5	85,100	11,000	25.8	51,800	11,500	15.7	49,600	11,700	15.1
Black	6,700	2,100	31.3	1.9	2,100	1,100	31.3	2,500	500	37.3	900	200	13.4	500	200	7.4
Asian	10,400	4,200	40.4	2.9	4,500	1,700	43.3	2,600	900	25.0	1,200	500	11.5	900	300	8.7
Native American	2,100	500	23.8	0.6	500	*	23.8	1,300	400	61.9	100	*	4.8	100	*	4.8
Hispanic	7,300	2,700	37.0	2.1	2,500	1,100	34.2	1,500	300	20.5	900	600	12.3	1,100	200	15.1
Psychologists	209,500	88,400	42.2		14,900	6,100	7.1	53,900	19,300	29.7	35,300	11,700	16.9	13,800	5,900	6.6
White	196,000	81,600	41.6	93.6	14,100	5,600	7.2	51,400	18,000	26.2	33,100	10,700	16.9	11,000	4,400	5.6
Black	7,300	4,300	58.9	3.5	400	300	5.4	1,600	700	21.9	1,300	600	17.8	1,600	1,400	21.9
Asian	2,000	1,200	60.0	1.0	200	200	10.0	500	300	25.0	300	100	15.0	100	100	5.0
Native American	1,800	300	16.7	0.9	*	*		*	*		300	100	11.1	300	*	16.7
Hispanic	4,200	2,200	52.4	2.0	*	*		1,100	700	26.2	400	200	9.5	1,000	300	23.8
Social Scientists	329,200	92,400	28.1		41,100	10,700	12.5	122,100	28,400	37.1	63,900	17,000	19.4	45,800	18,500	13.9
White	292,100	80,600	27.6	88.7	38,500	9,800	13.2	106,400	23,900	36.4	96,100	15,100	19.2	41,400	16,600	14.2
Black	15,900	4,800	30.2	4.8	600	200	3.8	7,500	1,400	47.2	2,600	200	16.4	2,100	1,000	13.2
Asian	13,100	4,800	36.6	4.0	1,400	500	10.7	4,700	2,500	35.9	4,400	1,300	33.6	1,600	500	12.2
Native American	1,200	200	16.7	0.4	100	100	8.3	500	*	41.7	200	100	16.7	100	*	8.3
Hispanic	10,200	2,900	28.4	3.1	400	100	3.9	4,000	700	39.2	1,700	500	16.7	1,800	1,100	17.6
Engineers	2,214,100	74,500	3.7		728,500	29,500	32.9	689,400	10,900	31.1	48,400	3,400	2.2	496,400	23,300	22.4
White	2,107,400	65,500	3.1	91.1	646,500	24,400	32.0	647,100	9,000	32.1	42,500	2,800	2.1	453,100	20,700	22.5
Black	37,100	3,100	8.4	1.7	12,800	1,100	34.5	8,700	600	23.5	1,500	100	4.0	10,800	1,000	29.1
Asian	117,400	6,100	5.2	5.3	53,900	3,000	45.9	22,800	1,000	19.4	3,800	400	3.2	23,400	1,300	19.9
Native American	11,700	200	1.7	0.5	3,200	200	27.4	4,200	*	35.9	*	*		2,300	*	19.7
Hispanic	47,800	2,600	5.4	2.2	16,700	1,100	34.9	12,500	300	26.2	700	*	1.5	12,200	900	25.5

*Too few cases to estimate. +Includes other and no report. **Includes all racial groups. †Production/Inspection, Reporting and Computing

Detail will not add to total employed because racial and ethnic categories are not mutually exclusive and total includes other and no report.

SOURCE: Women and Minorities in Science, National Science Foundation, January 1986

TABLE 4-22

EMPLOYED SCIENTISTS AND ENGINEERS BY SEX, RACE, ETHNICITY AND YEARS OF PROFESSIONAL EXPERIENCE, 1984

	YEARS OF EXPERIENCE											
	Total†	< 1	(H) %	1-4	(H) %	5-9	(H) %	10-14	(H) %	15-24	(H) %	25 or more	(H) %
Total Scientists & Engineers	**3,995,500**	**115,000**	**2.9**	**571,200**	**14.3**	**554,300**	**13.9**	**634,100**	**15.9**	**990,500**	**24.8**	**1,045,500**	**26.2**
Women	512,600	39,000	7.6	162,300	31.7	110,200	21.5	85,600	16.7	72,400	14.1	33,400	6.5
Black	90,500	4,600	5.1	15,700	17.3	15,600	17.2	18,500	20.4	21,600	23.9	13,600	15.0
Asian	186,500	4,200	2.3	23,200	12.4	31,500	16.9	42,200	22.6	56,000	30.0	26,200	14.0
Native American	20,400	700	3.4	1,800	8.8	2,500	12.3	2,400	11.8	5,700	27.9	6,300	30.9
Hispanic†	86,600	4,100	4.7	19,200	22.2	13,800	15.9	13,000	15.0	20,700	23.9	14,200	16.4
Scientists	**1,781,400**	**83,900**	**4.7**	**335,200**	**18.8**	**286,700**	**16.1**	**311,300**	**17.5**	**415,800**	**23.3**	**315,200**	**17.7**
Women	438,100	35,900	8.2	132,000	30.1	90,000	20.5	77,000	17.6	66,600	15.2	28,100	6.4
Black	53,400	3,300	6.2	11,600	21.7	8,600	16.1	10,100	18.9	11,400	21.3	7,800	14.6
Asian	69,100	2,400	3.5	11,600	16.8	12,500	18.1	19,000	27.5	15,500	22.4	7,700	11.1
Native American	8,600	400	4.7	900	10.5	1,000	11.6	500	5.8	3,100	36.0	2,600	30.2
Hispanic†	38,800	2,700	7.0	12,300	31.7	6,000	15.5	5,900	15.2	7,900	20.4	3,500	9.0
Physical Scientists	**254,100**	**5,600**	**2.2**	**28,400**	**11.2**	**32,400**	**12.8**	**35,100**	**13.8**	**71,400**	**28.1**	**75,300**	**29.6**
Women	28,300	1,500	5.3	7,700	27.2	5,100	18.0	4,200	14.8	5,300	18.7	3,100	11.0
Black	6,100	300	4.9	600	9.8	1,400	23.0	700	11.5	1,300	21.3	1,600	26.2
Asian	12,500	200	1.6	800	6.4	2,200	17.6	2,500	20.0	4,000	32.0	2,600	20.8
Native American	1,100	*	-	*	-	*	-	*	-	700	63.6	400	36.4
Hispanic†	4,300	200	4.7	500	11.6	400	9.3	700	16.3	1,100	25.6	1,000	23.3
Math Scientists	**100,400**	**2,000**	**2.0**	**11,400**	**11.4**	**13,000**	**12.9**	**18,400**	**18.3**	**32,900**	**32.8**	**22,100**	**22.0**
Women	21,900	700	3.2	4,300	19.6	5,100	23.3	5,200	23.7	4,200	19.2	2,400	11.0
Black	4,700	100	2.1	300	6.4	200	4.3	1,000	21.3	1,900	40.4	1,200	25.5
Asian	4,700	100	2.1	100	2.1	600	12.8	700	14.9	1,800	38.3	1,500	31.9
Native American	400	*	-	*	-	*	-	*	-	100	25.0	200	50.0
Hispanic†	2,700	*	-	600	22.2	100	3.7	700	25.9	1,200	44.4	*	-
Computer Scientists	**436,800**	**7,000**	**1.6**	**88,300**	**20.2**	**93,500**	**21.4**	**96,100**	**22.0**	**112,800**	**25.8**	**35,000**	**8.0**
Women	114,100	2,600	2.3	31,800	27.9	32,500	28.5	25,800	22.6	18,400	16.1	2,100	1.8
Black	12,100	400	3.3	2,600	21.5	3,500	28.9	2,800	23.1	2,100	17.4	700	5.8
Asian	24,600	600	2.4	5,700	23.2	5,100	20.7	8,900	36.2	3,500	14.2	700	2.8
Native American	1,800	*	-	100	5.6	200	11.1	200	11.1	1,000	55.6	100	5.6
Hispanic†	8,200	200	2.4	2,600	31.7	1,800	22.0	1,500	18.3	2,000	24.4	200	2.4
Environmental Scientists	**98,100**	**4,200**	**4.3**	**17,200**	**17.5**	**18,400**	**18.8**	**14,400**	**14.7**	**16,000**	**16.3**	**26,100**	**26.6**
Women	10,300	1,100	10.7	4,300	41.7	2,300	22.3	1,400	13.6	600	5.8	200	1.9
Black	600	100	16.7	100	16.7	200	33.3	100	16.7	200	33.3	100	16.7
Asian	1,800	*	-	100	5.6	300	16.7	600	33.3	400	22.2	300	16.7
Native American	300	*	-	*	-	200	66.7	*	-	*	-	100	33.3
Hispanic†	1,80	*	-	300	16.7	600	33.3	100	5.6	200	11.1	500	27.8

SOURCE: Women and Minorities in Science, National Science Foundation, January 1986

TABLE 4-22 continued

EMPLOYED SCIENTISTS AND ENGINEERS BY SEX, RACE, ETHNICITY AND YEARS OF PROFESSIONAL EXPERIENCE, 1984

	YEARS OF EXPERIENCE											
	Total†	< 1	(H) %	1-4	(H) %	5-9	(H) %	10-14	(H) %	15-24	(H) %	25 or more	(H) %
Life Scientists	**353,300**	**23,800**	**6.7**	**73,000**	**20.7**	**52,600**	**14.9**	**53,400**	**15.1**	**70,700**	**20.0**	**72,500**	**20.5**
Women	82,600	9,400	11.4	31,500	38.1	13,900	16.8	9,900	12.0	10,700	13.0	6,200	7.5
Black	6,700	400	6.0	1,300	19.4	400	6.0	1,900	28.4	1,900	28.4	500	7.5
Asian	10,400	500	4.8	1,700	16.3	1,500	14.4	2,800	26.9	2,800	26.9	800	7.7
Native American	2,100	100	4.8	100	4.8	300	14.3	*	-	300	14.3	1,300	61.9
Hispanic†	7,300	600	8.2	2,700	37.0	800	11.0	900	12.3	900	12.3	1,300	17.8
Psychologists	**209,500**	**14,600**	**7.0**	**33,500**	**16.0**	**33,800**	**16.1**	**38,800**	**18.5**	**51,600**	**24.6**	**32,400**	**15.5**
Women	88,400	9,300	10.5	18,800	21.3	15,700	17.8	17,000	19.2	16,000	18.1	9,400	10.6
Black	7,300	700	10.0	1,500	20.5	1,000	13.7	1,200	16.4	1,500	20.5	1,400	19.2
Asian	2,000	100	5.0	400	20.0	300	15.0	500	25.0	400	20.0	200	10.0
Native American	1,800	200	11.1	400	22.2	200	11.1	200	11.1	600	33.3	200	11.1
Hispanic†	4,200	500	11.9	2,200	52.4	500	11.9	600	14.3	300	7.1	200	4.8
Social Scientists	**329,200**	**26,700**	**8.1**	**83,300**	**25.3**	**43,000**	**13.1**	**55,280**	**16.8**	**60,500**	**18.4**	**51,800**	**15.7**
Women	92,400	11,300	12.2	33,600	36.4	15,400	16.7	13,500	14.6	11,500	12.4	4,800	5.2
Black	15,900	1,300	8.2	5,200	32.7	1,900	11.9	2,500	15.7	2,400	15.1	2,500	15.7
Asian	13,100	900	6.9	2,700	20.6	2,600	19.8	3,000	22.9	2,500	19.1	1,400	10.7
Native American	1,200	200	16.7	200	16.7	100	8.3	100	8.3	400	33.3	300	25.0
Hispanic†	10,200	1,100	10.8	3,400	33.3	1,800	17.6	1,400	13.7	2,100	20.6	200	2.0
Engineers	**2,214,100**	**31,100**	**1.4**	**236,100**	**10.7**	**267,600**	**12.1**	**322,800**	**14.6**	**574,600**	**26.0**	**730,400**	**33.0**
Women	74,500	3,000	4.0	30,300	40.7	20,200	27.1	8,500	11.4	5,800	7.8	5,300	7.1
Black	37,100	1,300	3.5	4,100	11.1	7,000	18.9	8,300	22.4	10,300	27.8	5,700	15.4
Asian	117,500	1,800	1.5	11,600	9.9	19,000	16.2	23,300	19.8	40,400	34.4	18,600	15.8
Native American	11,700	200	1.7	1,000	8.5	1,500	12.8	1,800	15.4	2,600	22.2	3,800	32.5
Hispanic†	47,800	1,400	2.9	6,900	14.4	7,800	16.3	7,100	14.9	12,800	26.8	10,800	22.6

† Also included in racial categories.

* Too few cases to estimate.

NOTE: Detail may not add to total employed because racial and ethnic categories are not mutually exclusive; total employed includes other and no report.

SOURCE: National Science Foundation Survey of New Entrants, Unpublished Data

TABLE 4-23

1982 AND 1983 SCIENCE AND ENGINEERING BACHELOR'S GRADUATES IN THE LABOR FORCE IN 1984, BY SEX AND RACE

1982 Graduates

FIELD OF DEGREE	TOTAL	MEN	WOMEN	WHITE	BLACK	ASIAN	OTHER	NO REPORT
TOTAL, ALL FIELDS	223,800	137,400	86,500	201,900	10,500	6,100	3,800	1,600
PHYSICAL SCIENCES	10,900	7,300	3,600	9,900	300	300	200	100
CHEMISTRY	7,500	4,100	3,100	6,600	300	200	100	(1)
PHYSICS/ASTRONOMY	2,900	2,600	300	2,600	(1)	200	(1)	(1)
OTHER PHYS SCIENCES	700	600	100	700	(1)	(1)	(1)	(1)
MATH/STATISTICS	9,100	4,800	4,300	8,200	400	200	300	(1)
COMPUTER SCIENCE	16,600	11,100	5,500	14,400	700	1,200	100	100
ENVIRON SCIENCE	6,200	4,800	1,600	6,100	(1)	(1)	(1)	100
ENGINEERING	60,500	54,100	6,400	55,400	1,400	2,400	1,100	500
AERO/ASTRO	1,900	1,800	100	1,900	(1)	(1)	(1)	(1)
CHEMICAL	5,200	4,100	1,100	4,800	100	200	100	(1)
CIVIL	8,300	7,300	1,000	8,200	200	300	200	100
ELECT/ELECTRON	16,700	15,500	1,200	14,400	800	1,000	400	300
INDUSTRIAL	3,000	2,100	900	2,700	100	(1)	100	100
MATERIALS	1,500	1,200	300	1,400	(1)	(1)	(1)	(1)
MECHANICAL	14,100	13,000	1,100	12,800	300	600	200	100
MINING	1,200	1,100	100	1,100	(1)	(1)	(1)	(1)
NUCLEAR	400	300	100	300	(1)	(1)	(1)	(1)
PETROLEUM	1,100	1,000	100	1,100	(1)	(1)	(1)	(1)
OTHER ENGINEERING	6,800	6,000	800	6,800	100	100	(1)	(1)
LIFE SCIENCES	31,700	15,700	16,000	29,000	1,300	600	600	300
BIOLOGY	20,500	8,000	12,600	18,600	1,100	400	100	200
AGR SCIENCE	11,200	7,700	3,500	10,400	200	200	400	(1)
PSYCHOLOGY	29,400	8,400	21,000	25,400	2,800	300	900	(1)
SOCIAL SCIENCES	59,100	31,300	27,800	53,400	3,700	1,100	500	300
ECONOMICS	16,500	11,800	4,700	14,600	800	1,100	(1)	(1)
SOCIO/ANTHRO	16,100	5,000	11,100	14,500	1,000	(1)	300	300
OTHER SOC SCIENCES	20,500	14,500	11,700	24,300	1,900	(1)	300	(1)

1983 Graduates

FIELD OF DEGREE	TOTAL	MEN	WOMEN	WHITE	BLACK	ASIAN	OTHER	NO REPORT
TOTAL, ALL FIELDS	241,500	152,700	88,800	211,300	11,600	7,300	5,300	2,000
PHYSICAL SCIENCES	11,500	7,900	3,600	10,500	400	400	100	100
CHEMISTRY	6,800	3,800	2,800	6,000	300	300	100	100
PHYSICS/ASTRONOMY	3,600	3,100	400	3,200	200	100	100	(1)
OTHER PHYS SCIENCES	1,300	900	400	1,200	(1)	(1)	(1)	(1)
MATH/STATISTICS	9,300	5,500	3,800	8,100	500	300	200	200
COMPUTER SCIENCE	23,700	14,700	9,000	21,000	800	1,300	500	100
ENVIRON SCIENCE	6,700	5,000	1,700	6,400	(1)	(1)	200	(1)
ENGINEERING	67,500	57,100	10,400	61,200	1,800	2,800	1,200	600
AERO/ASTRO	2,000	1,600	400	1,900	(1)	(1)	(1)	(1)
CHEMICAL	5,400	4,000	1,400	4,800	200	300	100	(1)
CIVIL	9,300	8,200	1,100	9,200	200	200	200	100
ELECT/ELECTRON	19,300	17,200	2,100	16,700	700	1,400	300	200
INDUSTRIAL	4,000	3,100	900	3,600	100	100	200	(1)
MATERIALS	1,300	1,100	200	1,200	(1)	(1)	(1)	(1)
MECHANICAL	16,200	13,900	2,400	15,100	400	500	200	100
MINING	1,200	1,000	200	1,200	(1)	(1)	(1)	(1)
NUCLEAR	500	400	(1)	300	(1)	200	(1)	(1)
PETROLEUM	1,200	1,100	100	1,200	(1)	(1)	(1)	(1)
OTHER ENGINEERING	6,400	5,000	1,500	5,800	200	200	100	100
LIFE SCIENCES	35,200	19,000	16,100	31,800	1,200	900	900	300
BIOLOGY	23,300	11,200	12,000	20,400	1,000	900	900	100
AGR SCIENCE	11,900	7,700	4,200	11,300	200	100	100	200
PSYCHOLOGY	26,000	9,500	16,500	23,600	1,100	800	400	100
SOCIAL SCIENCES	61,800	34,000	27,900	52,800	5,700	700	1,800	500
ECONOMICS	18,300	13,900	4,500	16,500	700	700	500	300
SOCIO/ANTHRO	16,300	5,700	10,600	12,500	2,900	(1)	700	200
OTHER SOC SCIENCES	26,400	14,400	12,000	23,500	2,100	(1)	500	(1)

SOURCE: National Science Foundation Survey of New Entrants, Unpublished Data

TABLE 4-24

1982 AND 1983 SCIENCE AND ENGINEERING MASTER'S GRADUATES IN THE LABOR FORCE IN 1984, BY SEX AND RACE

1982 Graduates

FIELD OF DEGREE	TOTAL	MEN	WOMEN	WHITE	BLACK	ASIAN	OTHER	NO REPORT
TOTAL, ALL FIELDS	43,100	29,600	13,500	37,600	1,200	3,000	1,000	300
PHYSICAL SCIENCES	2,500	1,800	700	2,200	200	100	(1)	(1)
CHEMISTRY	1,000	600	400	900	(1)	100	(1)	(1)
PHYSICS/ASTRONOMY	1,100	1,000	100	1,000	(1)	100	(1)	(1)
OTHER PHYS SCIENCES	500	200	200	300	100	(1)	(1)	(1)
MATH/STATISTICS	3,000	2,100	900	2,700	100	100	(1)	(1)
COMPUTER SCIENCE	4,400	3,200	1,200	3,600	(1)	700	(1)	(1)
ENVIRON SCIENCE	1,900	1,300	500	1,800	(1)	100	(1)	(1)
ENGINEERING	12,100	10,700	1,400	9,800	200	1,700	300	100
AERO/ASTRO	200	200	(1)	200	(1)	(1)	(1)	(1)
CHEMICAL	1,000	800	100	700	(1)	200	(1)	(1)
CIVIL	1,600	1,500	100	1,400	(1)	100	100	(1)
ELECT/ELECTRON	3,800	3,500	300	3,000	100	600	100	(1)
INDUSTRIAL	600	500	100	500	(1)	(1)	(1)	(1)
MATERIALS	400	300	(1)	300	(1)	100	(1)	(1)
MECHANICAL	2,000	1,900	200	1,500	(1)	400	100	(1)
MINING	100	100	(1)	100	(1)	(1)	(1)	(1)
NUCLEAR	200	100	(1)	200	(1)	(1)	(1)	(1)
PETROLEUM	200	200	(1)	100	(1)	(1)	(1)	(1)
OTHER ENGINEERING	2,000	1,600	400	1,800	(1)	100	(1)	100
LIFE SCIENCES	6,600	3,700	2,900	6,100	200	100	100	(1)
BIOLOGY	4,200	2,100	2,200	3,900	100	(1)	100	(1)
AGR SCIENCE	2,400	1,600	700	2,200	100	100	(1)	(1)
PSYCHOLOGY	3,800	1,800	2,000	3,400	100	(1)	300	100
SOCIAL SCIENCES	8,800	5,000	3,800	8,000	400	100	200	(1)
ECONOMICS	1,600	1,200	400	1,400	(1)	100	100	(1)
SOCIO/ANTHRO	1,500	1,200	400	1,500	(1)	(1)	(1)	(1)
OTHER SOC SCIENCES	5,700	2,700	3,000	5,200	300	(1)	200	(1)

1983 Graduates

FIELD OF DEGREE	TOTAL	MEN	WOMEN	WHITE	BLACK	ASIAN	OTHER	NO REPORT
TOTAL, ALL FIELDS	42,400	30,800	11,600	35,900	1,300	3,900	800	500
PHYSICAL SCIENCES	2,500	2,000	600	2,100	100	200	(1)	100
CHEMISTRY	1,100	700	300	900	(1)	100	(1)	(1)
PHYSICS/ASTRONOMY	1,000	1,000	100	900	100	100	(1)	(1)
OTHER PHYS SCIENCES	400	300	100	300	(1)	(1)	(1)	(1)
MATH/STATISTICS	2,500	1,800	700	2,200	(1)	200	(1)	(1)
COMPUTER SCIENCE	5,600	4,000	1,600	4,500	(1)	1,000	(1)	(1)
ENVIRON SCIENCE	1,800	1,300	500	1,800	(1)	(1)	(1)	(1)
ENGINEERING	12,900	11,500	1,400	10,400	200	1,900	200	200
AERO/ASTRO	500	400	100	400	(1)	100	(1)	(1)
CHEMICAL	1,000	800	200	700	(1)	200	(1)	(1)
CIVIL	1,700	1,500	200	1,400	(1)	200	100	(1)
ELECT/ELECTRON	3,800	3,600	200	2,800	100	800	(1)	(1)
INDUSTRIAL	500	400	100	500	(1)	(1)	(1)	(1)
MATERIALS	400	300	100	300	(1)	100	(1)	(1)
MECHANICAL	2,100	2,000	100	1,600	(1)	400	(1)	(1)
MINING	200	100	(1)	200	(1)	(1)	(1)	(1)
NUCLEAR	200	200	(1)	100	(1)	(1)	(1)	(1)
PETROLEUM	100	100	(1)	100	(1)	(1)	(1)	(1)
OTHER ENGINEERING	2,400	2,000	400	2,200	100	100	(1)	(1)
LIFE SCIENCES	6,900	4,600	2,300	6,300	100	300	200	(1)
BIOLOGY	4,000	2,700	1,400	3,600	(1)	200	100	(1)
AGR SCIENCE	2,900	1,900	1,000	2,700	(1)	100	100	(1)
PSYCHOLOGY	2,600	1,100	1,500	2,100	300	(1)	200	(1)
SOCIAL SCIENCES	7,600	4,600	3,000	6,600	400	300	100	100
ECONOMICS	1,500	1,100	400	1,300	100	200	(1)	(1)
SOCIO/ANTHRO	1,300	600	700	1,200	(1)	100	(1)	(1)
OTHER SOC SCIENCES	4,800	2,900	1,900	4,200	400	(1)	100	100

(1) TOO FEW CASES TO REPORT.

NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1984

TABLE 4-25

RATES OF LABOR FORCE PARTICIPATION, UNEMPLOYMENT, S/E EMPLOYMENT, AND S/E UTILIZATION OF RECENT S/E GRADUATES BY DEGREE LEVEL, FIELD AND SEX, 1984

	Labor Force Participation [1]		Unemployment Rate [2]		S/E Employment Rate [3]		S/E Utilization Rate [4]	
	Men	Women	Men	Women	Men	Women	Men	Women
BACHELOR'S GRADS								
Total S/E	97.5	93.5	4.8	6.8	69.5	48.5	66.1	45.2
Physical Scientists	96.5	93.4	9.0	7.8	71.9	73.4	66.4	67.7
Math Scientists	96.9	94.5	2.3	4.4	73.4	75.4	71.8	72.1
Computer Scientists	99.0	96.5	2.2	2.3	89.7	91.2	94.8	92.6
Environmental Scientists	94.4	95.1	7.7	4.4	62.3	56.9	57.5	50.6
Life Scientists	96.2	92.9	6.8	8.1	60.3	61.3	56.2	56.3
Psychologists	96.0	93.3	10.2	7.1	30.1	22.5	27.1	20.9
Social Scientists	97.6	91.6	5.7	7.2	37.6	23.7	35.5	22.0
Engineers	98.1	97.1	3.3	6.8	88.6	89.1	85.7	83.0
MASTER'S GRADUATES								
Total S/E	98.9	93.9	3.4	3.7	84.9	70.9	82.0	68.2
Physical Scientists	96.9	*	2.0	*	93.6	*	90.8	*
Math Scientists	97.1	95.9	1.5	5.5	96.3	*	94.8	88.5
Computer Scientists	99.6	92.8	1.1	1.3	94.8	92.6	93.8	91.3
Environmental Scientists	99.6	*	4.4	*	92.0	*	87.9	*
Life Scientists	97.8	89.9	4.7	3.6	79.6	79.4	75.9	76.5
Psychologists	100.0	92.0	2.7	2.8			58.1	38.1
Social Scientists	99.2	95.1	5.6	5.6			50.2	47.8
Engineers	99.2	98.7	3.3	6.8	94.0	93.5	91.1	92.0

* No rate computed for fewer than 1500 in labor force. NOTE: Data include combined 1982 and 1983 graduating cohorts exclusive of full-time graduate students.

[1] Ratio of those employed plus unemployed but seeking, to the total population.

[2] Ratio of those employed but seeking to total labor force.

[3] Ratio of those holding jobs in science or engineering to total employed graduates in S/E.

[4] Ratio of those holding jobs in science or engineering to number in the labor force.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1986

TABLE 4-26

SELECTED CHARACTERISTICS OF PHYSICALLY HANDICAPPED SCIENTISTS AND ENGINEERS, 1984

Field	Type of physical handicap				
	Total population	Visual	Auditory	Ambulatory	Other
Total scientists and engineers	91,600	20,000	15,700	21,400	34,400
Scientists	40,200	8,800	8,500	9,100	13,800
Physical scientists	6,500	1,600	800	1,800	2,300
Mathematical scientists	2,500	400	900	500	700
Computer specialists	10,000	2,000	3,100	2,000	2,900
Environmental scientists	2,900	600	500	600	1,200
Life scientists	5,700	1,600	800	1,000	2,200
Psychologists	7,500	1,500	1,100	1,400	3,500
Social scientists	5,300	1,200	1,300	1,800	1,000
Engineers	51,300	11,300	7,200	12,300	20,700

CHAPTER 5

ACADEMIC WORK FORCE

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SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States, 1983, National Science Foundation, NSF 85-303

TABLE 5-1

DOCTORAL SCIENTISTS AND ENGINEERS IN ACADEMIC INSTITUTIONS BY FIELD, RANK AND SEX, 1983

	Professor	%	Associate Professor	%	Assistant Professor	%	Instructor	%	Other	%	Total Faculty**
Total Fields											
Men	58,490	49.8	34,838	29.7	19,934	17.0	373	0.3	2,865	2.4	117,462
Women	3,868	20.9	5,951	32.1	6,595	35.6	372	2.0	1,306	7.0	18,528
All Scientists											
Men	50,468	49.1	30,687	29.9	17,763	17.3	373	0.3	2,631	2.6	102,783
Women	3,843	21.0	5,870	32.1	6,504	35.5	370	2.0	1,287	7.0	18,305
Chemists											
Men	5,911	63.1	1,980	21.1	1,172	12.5	10	0.1	235	2.5	9,375
Women	295	29.5	280	28.0	292	29.2	44	4.4	82	8.2	1,001
Physicists/Astronomers											
Men	4,267	60.5	1,755	24.9	748	10.6	40	0.6	191	2.7	7,055
Women	73	32.4	59	26.2	69	30.7	8	3.6	13	5.8	225
Mathematicians											
Men	4,473	50.3	2,677	30.1	1,561	17.5	90	1.0	72	0.8	8,899
Women	201	25.4	266	33.7	248	31.4	16	2.0	34	4.3	790
Statisticians											
Men	606	42.8	528	37.3	229	16.2	7	0.5	20	1.4	1,415
Women	15	8.1	52	28.1	110	59.5	2	1.1	6	3.2	185
Computer Specialists											
Men	809	34.3	844	35.8	610	25.9	*	0.0	92	3.9	2,359
Women	33	16.5	54	27.0	78	39.0	5	2.5	25	12.5	200
Earth Scientists											
Men	1,698	51.5	937	28.4	568	17.2	*	0.0	50	1.5	5,298
Women	29	19.7	31	21.1	62	42.2	4	2.7	19	12.9	147
Oceanographers											
Men	165	35.6	163	35.2	110	23.8	*	0.0	23	5.0	463
Women	2	4.8	12	28.6	24	57.1	*	0.0	4	9.5	42
Atmospheric Scientists											
Men	176	33.0	134	25.1	193	36.1	*	0.0	29	5.4	534
Women	3	14.3	14	66.7	*	0.0	*	0.0	4	19.0	21
Biological Scientists											
Men	8,920	46.2	6,018	31.2	3,563	18.5	54	0.3	671	3.5	19,311
Women	797	19.4	1,285	31.2	1,333	32.4	141	3.4	472	11.5	4,117
Agricultural Scientists											
Men	2,151	52.0	1,062	25.7	740	17.9	*	0.0	147	3.6	4,137
Women	24	14.0	29	16.7	106	61.6	3	1.7	6	3.5	172
Medical Scientists											
Men	2,608	45.9	1,571	27.6	1,099	19.3	38	0.7	257	4.5	5,682
Women	411	20.6	728	36.5	646	32.4	22	1.1	116	5.8	1,996
Economists											
Men	4,365	49.5	2,344	26.6	1,707	19.4	68	0.8	243	2.8	8,818
Women	210	27.3	214	27.8	279	36.3	3	0.4	51	6.6	769
Sociologists/Anthropologists											
Men	2,569	43.1	2,064	34.7	1,151	19.3	*	0.0	120	2.0	5,934
Women	491	21.1	810	34.9	858	37.0	*	0.0	88	3.8	2,321
Other Social Scientists											
Men	6,392	44.3	5,026	34.8	2,592	17.7	35	0.2	302	2.1	14,434
Women	460	19.1	798	33.1	954	39.6	43	1.8	117	4.9	2,412
Engineers											
Men	8,022	54.6	4,151	28.3	2,171	14.8	*	0.0	234	1.6	14,679
Women	25	11.2	81	36.3	91	40.8	2	0.9	19	8.5	223

* No Cases Reported. ** Includes the "No Report" Category.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States - 1983 Profile, National Research Council

TABLE 5-2

ACADEMIC POSITION OF DOCTORAL SCIENTISTS AND ENGINEERS BY YEAR OF PH.D., FIELD AND SEX, 1983

Academic Position	All Fields		Field of Doctorate/Sex					
			EMP		Life Sciences		Behav/Soc Sci	
	Male	Female	Male	Female	Male	Female	Male	Female
Total, 1940-1959 Ph.D.s	28,400	2,000	11,700	500	9,000	900	7,700	700
Faculty	92.5	84.0	88.3	84.3	96.2	80.1	94.5	88.3
Professor	85.2	59.6	80.8	61.8	88.0	51.7	88.6	67.5
Associate Professor	6.2	18.7	5.7	15.2	7.8	20.3	5.2	18.9
Assistant Professor	0.7	3.5	1.1	3.6	0.3	5.4	0.7	1.3
Instructor	0.4	2.2	0.8	3.6	0.1	2.7		0.7
Nonfaculty	3.9	7.4	6.7	7.1	1.9	8.7	2.1	6.0
Teaching Staff*	1.1	1.3	0.9	0.9	0.8	0.6	1.9	2.5
Research Staff*	2.8	6.0	5.8	6.2	1.1	8.1	0.2	3.5
Postdoctoral Appointment	0.4	0.5	0.4		0.2	0.6	0.5	0.7
Other/No Report	3.2	8.1	4.6	8.6	1.7	10.6	2.8	5.0
Total, 1960-1969 Ph.D.s	52,100	4,900	24,400	900	13,900	1,900	13,700	2,000
Faculty	93.5	84.9	91.3	79.1	95.5	84.9	95.3	87.5
Professor	70.5	41.8	70.5	37.4	70.1	33.9	70.7	51.5
Associate Professor	21.0	32.7	18.9	31.0	23.0	37.1	22.7	29.3
Assistant Professor	1.6	8.4	1.1	7.8	2.4	11.9	1.8	5.3
Instructor	0.4	2.0	0.7	2.9		2.0		1.5
Nonfaculty	4.1	7.6	6.2	11.5	2.1	8.9	2.2	4.5
Teaching Staff*	0.4	1.7	0.3	2.0	0.2	1.4	0.7	1.9
Research Staff*	3.7	5.9	6.0	9.5	1.9	7.6	1.5	2.6
Postdoctoral Appointment	0.1	1.2		1.5	0.3	1.1	0.3	1.2
Other/No Report	2.3	6.3	2.5	7.8	2.1	5.0	2.3	6.9
Total, 1970-1975 Ph.D.s	41,700	7,800	15,400	1,100	12,400	2,900	13,800	3,800
Faculty	86.8	83.0	81.6	76.0	88.3	79.7	91.4	87.5
Professor	25.1	14.7	24.9	13.1	20.7	12.5	29.2	17.0
Associate Professor	48.8	44.4	46.6	36.2	50.9	38.6	49.3	51.2
Assistant Professor	12.1	21.4	9.4	21.9	15.7	26.1	12.0	17.6
Instructor	0.8	2.4	0.6	4.8	1.0	2.5	0.8	1.7
Nonfaculty	7.1	7.9	12.7	15.3	5.6	10.1	2.2	4.1
Teaching Staff*	0.7	0.9	0.8	1.6	0.9	0.4	0.4	1.1
Research Staff*	6.4	7.0	12.0	13.7	4.7	9.7	1.8	3.0
Postdoctoral Appointment	1.3	2.9	1.2	1.7	1.3	4.6	1.5	1.9
Other/No Report	4.7	6.3	4.4	7.0	4.8	5.6	4.9	6.5
Total, 1976-1982 Ph.D.s	39,200	12,800	13,600	1,400	12,500	5,200	13,200	6,200
Faculty	71.4	62.4	68.1	60.7	62.7	49.9	82.9	73.2
Professor	1.9	2.3	1.4	1.8	0.9	2.2	3.2	2.6
Associate Professor	20.2	12.0	18.4	9.8	13.1	9.1	28.8	14.9
Assistant Professor	47.6	44.8	47.0	47.1	47.0	34.8	48.9	52.6
Instructor	1.7	3.3	1.3	2.1	1.7	3.8	2.0	3.1
Nonfaculty	9.7	10.3	14.6	12.5	7.8	11.3	6.5	9.0
Teaching Staff*	0.8	2.1	0.3	2.1	0.5	2.0	1.4	2.3
Research Staff*	8.9	8.2	14.3	10.5	7.3	9.4	5.0	6.7
Postdoctoral Appointment	13.6	17.4	12.2	18.2	25.3	31.4	3.8	5.6
Other/No Report	5.4	9.9	5.1	8.6	4.2	7.5	6.8	12.2

*Includes nonfaculty staff members whose primary work activity is teaching.
*Includes nonfaculty staff members whose primary work activity is basic research, applied research, development, or design.
NOTE: EMP = Engineering, Mathematics, Computer Sciences, Physics/Astronomy, Chemistry and Earth/Environmental Sciences. Life Sciences = Agricultural Sciences, Medical Sciences, and Biological Sciences. Behav/Soc Sci = Psychology and Social Sciences.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States - 1983 Profile, National Research Council

TABLE 5-3

ACADEMIC POSITION OF HUMANITIES DOCTORATES BY YEAR OF PH.D., FIELD AND SEX, 1983

(in percent)

1983 Academic Position/ Year of Ph.D.	All Fields		Field of Doctorate/Sex							
			Eng/Amer Lit		History		Other Lang		Other Humn.	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total, 1940-1959 Ph.D.s (N)	6,900	900	1,700	300	2,200	200	1,100	200	1,900	200
Faculty	95.3	86.1	99.2	82.6	90.0	87.1	95.0	88.7	98.1	86.3
Professor	86.6	73.2	90.6	70.7	82.2	75.3	86.3	71.8	88.2	76.9
Associate Professor	8.5	10.0	8.6	8.5	7.8	11.8	8.7	13.2	9.1	5.5
Assistant Professor	0.2	2.4		3.5				1.9	0.8	3.8
Instructor		0.6						1.9		
Nonfaculty	1.5	1.9			3.5	1.1	0.6	4.1	1.0	2.2
Teaching Staff*	0.8	1.6			2.2	1.1	0.6	4.1	0.1	0.5
Research Staff+	0.6	0.3			1.2				0.9	1.6
Postdoctoral Appointment	0.8	0.3	0.4		1.3		2.1	1.1		
Other	2.1	9.6	0.4	14.3	5.2	8.1	2.2	6.0	0.1	9.9
No Report	0.2	2.0		3.1		3.8			0.8	1.6
Total, 1960-1969 Ph.D.s (N)	14,100	3,200	3,700	1,200	4,100	400	2,400	900	3,900	700
Faculty	93.5	87.2	90.0	83.2	97.6	89.2	92.9	87.6	92.9	92.1
Professor	69.0	53.6	67.2	54.3	76.6	52.7	58.3	45.7	69.4	62.9
Associate Professor	22.5	28.1	22.8	24.4	18.6	31.6	30.3	35.9	21.5	22.6
Assistant Professor	1.5	3.6		2.9	2.4	4.9	3.6	3.9	0.8	3.7
Instructor	0.5	1.9		1.6			0.8	2.2	1.2	3.0
Nonfaculty	1.8	1.6	2.9		0.7		2.4	2.7	1.5	4.0
Teaching Staff*	1.5	1.1	2.5		0.7		1.4	2.7	1.5	1.6
Research Staff+	0.3	0.5	0.4				1.0			2.4
Postdoctoral Appointment	1.5	1.0		1.4	0.8	1.8	1.3	0.5	3.8	0.3
Other	2.2	7.7	5.2	12.0		6.7	2.4	6.4	1.4	2.9
No Report	1.1	2.5	1.9	3.4	1.0	2.2	1.0	2.8	0.5	0.7
Total, 1970-1975 Ph.D.s (N)	14,600	5,400	3,800	1,900	3,800	800	2,600	1,500	4,400	1,200
Faculty	93.4	84.7	93.8	85.8	94.1	82.7	95.8	85.5	91.0	83.4
Professor	31.4	19.1	27.7	17.3	39.2	23.0	27.1	20.4	30.2	17.7
Associate Professor	50.7	45.5	55.2	47.1	46.9	39.6	53.7	44.8	48.4	47.5
Assistant Professor	9.5	16.4	9.6	19.0	4.9	12.9	13.0	15.2	11.1	16.4
Instructor	1.9	3.7	1.3	2.5	3.1	7.2	2.0	5.1	1.3	1.7
Nonfaculty	1.6	4.3	0.7	4.4	1.5	3.9	1.2	2.3	2.9	7.0
Teaching Staff*	1.3	2.8	0.7	2.7	0.7	3.3	1.0	1.5	2.4	4.2
Research Staff+	0.3	1.5		1.7	0.8	0.7	0.2	0.8	0.4	2.8
Postdoctoral Appointment	0.9	1.1	0.6	0.1	0.8	0.3	1.7	2.8	0.8	0.9
Other	3.0	7.6	3.4	7.5	2.9	11.0	1.4	7.3	3.6	6.0
No Report	1.1	2.3	1.6	2.2	0.7	2.1		2.2	1.7	2.7
Total, 1976-1982 Ph.D.s (N)	9,600	6,400	2,300	1,900	2,000	600	1,500	1,900	3,800	2,000
Faculty	86.6	76.3	82.7	74.5	82.8	79.9	87.8	75.4	90.5	77.8
Professor	9.0	4.3	11.2	6.4	11.9	0.3	3.9	2.9	8.2	4.7
Associate Professor	30.0	17.9	25.2	23.5	28.3	13.8	26.5	12.5	35.2	18.9
Assistant Professor	43.6	48.6	40.6	36.6	37.2	61.4	55.6	55.4	43.9	49.5
Instructor	4.1	5.6	5.7	8.0	5.5	4.3	1.8	4.5	3.3	4.7
Nonfaculty	3.5	4.8	2.8	5.2	5.8	1.7	2.3	6.1	3.3	4.1
Teaching Staff*	3.1	3.5	2.8	3.9	3.9	0.2	1.7	5.1	3.3	2.7
Research Staff+	0.5	1.3		1.3	1.9	1.5	0.6	1.0		1.4
Postdoctoral Appointment	1.1	3.4	1.1	1.3	1.5	1.7	2.2	4.5	0.3	4.7
Other	6.1	13.2	6.9	15.2	9.1	16.7	6.5	12.6	3.9	11.0
No Report	2.7	2.3	6.5	3.8	0.9		1.1	1.4	1.9	2.4

*Includes nonfaculty staff members whose primary work activity is teaching.

+Includes nonfaculty staff members whose primary work activity is basic research, applied research, development, or design.

NOTE: Other Languages & Literature = Classical Languages and Literature, and Modern Languages and Literature. Other Humanities = Art History, Music, Speech/Theater, Philosophy, and "Other" Humanities.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-4

PERCENTAGE OF ACADEMICALLY EMPLOYED SCIENCE AND ENGINEERING PhDs BY FIELD AND RACIAL/ETHNIC CATEGORY

Ph.D. Field	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Total Sci/Engin Employed	295,731	231,029	27,044	6,313	1,423	2,531	1,581	778	19,516	848	638	18,007
% in Academe	53.6	53.8	56.9	60.3	61.8	58.6	59.0	65.7	43.5	39.5	70.1	42.7
EMP Employed	142,110	105,991	15,510	1,992	445	704	579	264	13,035	387	148	12,477
% in Academe	43.4	43.4	48.9	54.4	60.7	58.1	44.9	54.5	31.0	40.3	41.2	30.5
Mathematics Employed	16,035	12,137	1,620	296	89	153	23	31	1,082	53	*	985
% in Academe	76.6	75.4	80.5	80.7	95.5	80.4	82.6	38.7	76.8	88.7	*	75.1
Computer Sci Employed	1,783	1,375	144	23	*	*	*	16	170	17	*	153
% in Academe	45.3	51.3	11.8	87.0	*	*	*	81.3	28.2	11.8	*	30.1
Physics/Astronomy Employed	25,611	19,145	3,223	402	85	156	85	76	1,439	16	*	1,423
% in Academe	50.6	48.4	56.6	50.5	71.8	42.9	54.1	38.2	57.3	31.3	*	57.6
Chemistry Employed	41,970	32,356	4,784	761	138	266	272	85	2,773	168	71	2,534
% in Academe	34.1	33.6	37.4	52.2	37.7	51.5	50.4	83.5	26.0	28.0	47.9	25.3
Environmental Sci Employed	9,729	8,073	943	100	36	13	24	27	338	8	*	324
% in Academe	46.9	46.5	56.1	38.0	58.3	7.7	20.8	40.7	34.9	75.0	*	32.7
Engineering Employed	46,982	32,905	4,796	410	94	116	171	29	7,233	125	*	7,058
% in Academe	35.6	37.2	44.2	45.4	51.1	69.8	28.7	27.6	20.7	39.2	*	20.5
Life Sci Employed	70,929	56,859	5,503	1,777	400	682	500	195	4,184	269	163	3,752
% in Academe	63.6	63.5	64.3	66.5	74.0	60.6	66.4	71.8	64.1	32.3	86.5	65.4
Agricultural Sci Employed	13,430	11,046	795	244	67	53	65	59	914	74	59	781
% in Academe	57.3	57.3	50.4	78.3	68.7	90.6	95.4	59.3	56.9	58.1	79.7	55.1
Medical Sci Employed	7,949	5,929	754	278	94	120	46	18	647	28	18	601
% in Academe	56.5	56.8	55.4	57.9	55.3	57.5	63.0	61.1	55.5	42.9	100.0	54.7
Biological Sci Employed	49,550	39,884	3,954	1,255	239	509	389	118	2,623	167	86	2,370
% in Academe	66.4	66.3	68.7	66.1	82.8	58.2	62.0	79.7	68.7	19.2	88.4	71.5
Behavioral Sci Employed	82,692	68,179	6,031	2,544	578	1,145	502	319	2,297	192	327	1,778
% in Academe	62.7	61.8	70.6	60.7	54.3	57.8	67.7	71.2	76.9	47.9	74.9	80.4
Psychology Employed	36,600	31,382	2,050	1,192	260	559	242	131	296	113	18	165
% in Academe	48.0	47.9	50.4	50.3	39.6	48.1	58.3	65.6	53.4	54.9	44.4	53.3
Social Sci Employed	46,092	36,797	3,981	1,352	318	586	260	188	2,001	79	309	1,613
% in Academe	74.4	73.7	81.0	69.8	66.4	67.1	76.5	75.0	80.4	38.0	76.7	83.1

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

Table 5-5

PERCENTAGE OF ACADEMICALLY EMPLOYED HUMANITIES DOCTORATES BY FIELD AND RACIAL/ETHNIC CATEGORY, 1979

Ph.D. Field	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Fgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Total Humanities Employed	62,896	18,068	4,882	2,103	920	795	127	261	1,263	632	97	522
% in Academe	84.0	83.7	86.9	81.6	82.2	84.8	81.9	69.3	91.3	93.5	95.9	87.7
History Employed	16,258	13,120	810	464	175	225	13	51	150	22	38	90
% in Academe	78.5	77.3	95.7	81.3	89.1	84.4	100.0	35.3	100.6	100.0	100.0	100.0
English Employed	17,653	14,865	595	462	271	156	19	13	93	*	17	60
% in Academe	87.1	87.7	68.2	81.0	75.9	89.1	84.2	84.6	93.5	*	100.0	90.0
Total Languages Employed	12,505	7,327	2,514	607	404	113	39	51	683	529	14	139
% in Academe	85.5	84.5	87.0	84.3	85.1	86.7	48.7	100.0	90.8	93.6	71.4	87.7
Classics Employed	1,530	1,108	189	38	*	13	*	*	*	*	*	*
% in Academe	77.3	79.5	64.0	50.0	*	100.0	*	*	*	*	*	*
Modern Languages Employed	10,975	6,219	2,325	569	396	100	28	45	676	529	14	132
% in Academe	86.7	85.4	88.9	86.6	86.9	85.0	67.9	100.0	90.7	93.6	71.4	81.8
Other Humanities Employed	16,480	12,756	963	570	67	301	56	146	337	76	28	233
% in Academe	85.0	85.3	90.8	79.3	71.6	82.1	100.0	69.2	87.8	90.8	100.0	85.4
Art History Employed	1,535	1,201	131	19	*	*	*	10	31	*	*	21
% in Academe	83.5	83.7	87.8	47.4	*	*	*	40.0	90.3	*	*	100.0
Music Employed	4,043	3,412	114	188	14	117	18	39	36	9	*	21
% in Academe	84.1	83.9	91.2	80.3	57.1	77.8	100.0	87.2	63.9	66.7	*	52.4
Speech/Theater Employed	3,689	2,891	121	123	*	79	*	38	11	*	*	*
% in Academe	86.3	87.1	100.0	95.9	*	93.7	*	100.0	100.0	*	*	*
Philosophy Employed	5,187	3,939	337	110	8	24	27	51	159	34	21	104
% in Academe	84.1	85.0	87.5	60.9	100.0	54.2	100.0	37.3	89.9	97.1	100.0	85.6
Other Fields Employed	2,026	1,313	260	130	43	75	*	8	100	23	*	77
% in Academe	88.2	87.5	91.9	82.3	69.8	89.5	*	75.0	91.0	100.0	*	88.3

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States - 1983 Profile, National Research Council

Table 5-6

TENURE STATUS OF ACADEMICALLY EMPLOYED SCIENCE AND ENGINEERING Ph.D.S BY FIELD OF DOCTORATE, AGE AND SEX, 1983

Age and Tenure Status	All Fields		Field of Doctorate/Sex					
			EMP		Life Sciences		Behav/Soc Sci	
	Male	Female	Male	Female	Male	Female	Male	Female
Total Academically Employed (N)	161,400	27,500	65,200	3,900	47,800	10,900	48,400	12,700
Tenured	65.5	39.2	64.8	38.9	62.2	32.1	69.6	45.4
Not Tenured	25.8	47.1	24.6	45.7	29.2	51.4	24.2	43.9
In Track Position	14.0	20.9	12.5	20.2	15.8	17.6	14.2	24.0
Not in Track Position	8.4	19.9	8.2	20.4	10.0	26.6	7.0	14.0
Type Position Unknown	3.5	6.3	3.9	5.1	3.4	7.2	3.0	5.9
No Report	8.7	13.7	10.5	15.4	8.6	16.5	6.2	10.7
Age - 35 or Under (N)	26,400	7,600	9,900	1,100	8,900	3,200	7,600	3,300
Tenured	13.4	7.6	13.5	7.3	6.4	3.4	21.3	11.7
Not Tenured	66.0	69.5	64.8	66.6	69.7	66.7	63.1	73.0
In Track Position	44.0	36.8	43.9	40.7	42.6	25.5	45.8	46.4
Not in Track Position	15.4	25.1	14.4	21.6	20.8	32.1	10.5	19.4
Type Position Unknown	6.5	7.6	6.5	4.3	6.3	9.1	6.8	7.2
No Report	20.7	23.0	21.7	26.1	23.9	29.9	15.6	15.3
Age - 36 to 45 (N)	63,400	11,700	25,900	1,600	18,700	4,600	18,800	5,500
Tenured	63.9	41.8	64.1	40.6	60.0	33.7	67.6	49.0
Not Tenured	28.9	46.7	26.7	45.6	33.5	53.1	27.5	41.7
In Track Position	15.6	20.4	13.0	18.4	18.7	19.3	16.2	21.9
Not in Track Position	9.8	19.8	9.6	22.1	10.9	26.3	8.8	13.5
Type Position Unknown	3.6	6.6	4.1	5.1	3.9	7.5	2.5	6.3
No Report	7.1	11.5	9.2	13.8	6.5	13.2	4.9	9.3
Age - 46 or Older (N)	71,500	8,200	29,400	1,200	20,200	3,000	21,900	3,900
Tenured	86.2	64.9	82.7	65.0	88.8	60.0	88.4	68.8
Not Tenured	8.2	27.0	9.3	27.1	7.3	32.8	7.6	22.5
In Track Position	1.5	7.0	1.6	4.2	1.4	6.8	1.3	8.0
Not in Track Position	4.5	15.3	4.9	17.0	4.3	21.2	4.2	10.3
Type Position Unknown	2.2	4.6	2.8	5.9	1.6	4.8	2.1	4.2
No Report	5.6	8.1	8.0	7.9	3.9	7.2	4.0	8.8

NOTE: EMP = Engineering, Mathematics, Computer Sciences, Physics/Astronomy, Chemistry and Earth/Environmental Sciences. Life Sciences = Agricultural Sciences, Medical Sciences, and Biological Sciences. Behav/Soc Sci = Psychology and Social Sciences.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States - 1983 Profile, National Research Council

TABLE 5-7

TENURE STATUS OF ACADEMICALLY EMPLOYED PH.D.S IN THE HUMANITIES BY FIELD OF DOCTORATE, AGE AND SEX, 1983

Age and Tenure	All Fields		Field of Doctorate/Sex							
			Eng/Amer Lit		History		Other Lang		Other Humn.	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total Academically Employed (N)	45,300	15,800	11,600	5,200	12,100	2,000	7,700	4,500	13,900	4,100
Tenured	77.2	51.1	79.0	54.7	80.4	51.7	76.6	50.6	73.2	46.8
Not Tenured	17.9	39.4	16.3	34.3	16.1	39.0	18.5	40.2	20.3	45.1
Tenure Track	9.5	17.0	9.5	12.5	6.7	13.3	10.6	19.5	11.4	21.7
Non-Tenure Track	5.7	16.5	4.4	16.0	7.2	20.1	5.1	15.0	5.7	17.1
Type Position Unknown	2.6	5.9	2.4	5.8	2.2	5.6	2.8	5.7	3.2	6.3
No Report	4.9	9.5	4.6	11.0	3.5	9.2	4.8	9.1	6.5	8.0
Age - 35 or Under (N)	3,500	2,100	900	500	700	200	600	700	1,300	700
Tenured	18.5	12.6	15.8	23.1	17.4	3.3	18.0	9.9	21.3	10.7
Not Tenured	71.9	74.2	75.4	59.8	78.1	86.7	74.8	75.2	64.8	79.4
Tenure Track	48.8	45.5	68.1	25.7	21.5	52.3	48.1	54.2	49.8	49.1
Non-Tenure Track	13.4	22.3	0.3	32.2	37.5	27.8	19.0	13.4	7.2	22.0
Type Position Unknown	9.8	6.4	7.0	2.0	19.1	6.6	7.7	7.6	7.7	8.3
No Report	9.6	13.2	8.9	17.1	4.6	10.0	7.2	14.9	13.9	10.0
Age - 36 to 45 (N)	17,500	6,700	4,800	2,100	4,500	800	2,900	2,000	5,300	1,800
Tenured	71.8	46.4	79.5	48.3	72.2	50.5	70.9	46.1	64.9	42.8
Not Tenured	23.4	44.6	15.0	39.7	23.4	41.2	25.7	45.8	29.7	50.4
Tenure Track	12.7	19.5	7.2	14.9	12.4	13.3	15.7	22.4	16.4	24.5
Non-Tenure Track	7.9	17.9	5.4	15.8	10.4	22.6	6.8	16.8	8.7	19.4
Type Positoin Unknown	2.7	7.2	2.4	9.0	0.6	5.3	3.1	6.6	4.7	6.5
No Report	4.8	9.0	5.5	12.0	4.4	8.3	3.5	8.2	5.4	6.8
Age - 46 or Older (N)	24,200	6,900	5,800	2,500	6,900	900	4,200	1,900	7,300	1,600
Tenured	89.6	67.4	88.6	65.9	92.5	65.9	89.0	70.2	88.2	67.5
Not Tenured	6.0	23.8	8.1	25.1	4.6	24.2	5.6	21.9	5.9	23.8
Tenure Track	1.6	5.9	2.2	8.0	1.6	2.7	1.7	4.0	1.2	6.3
Non-Tenure Track	3.0	13.5	4.3	13.1	2.1	15.8	2.0	13.8	3.4	12.5
Type Position Unknown	1.4	4.5	1.6	4.1	0.8	5.7	1.9	4.1	1.4	5.0
No Report	4.4	8.8	3.3	9.0	2.9	9.9	5.5	8.0	5.9	8.7

NOTE: Other Languages & Literature = Classical Languages and Literature, and Modern Languages and Literature. Other Humanities = Art History, Music, Speech/Theater, Philosophy, and "Other" Humanities.

SOURCE: National Center for Education Statistics, Preliminary Releases and Unpublished Data

TABLE 5-8

PERCENT OF FACULTY MEMBERS WITH TENURE, SELECTED YEARS, 1977-78 - 1982-83

ACADEMIC RANK	ALL INSTITUTIONS				UNIVERSITIES				OTHER FOUR-YEAR INSTITUTIONS				TWO-YEAR INSTITUTIONS			
	1977-78	1979-80	1981-82	1982-83	1977-78	1979-80	1981-82	1982-83	1977-78	1979-80	1981-82	1982-83	1977-78	1979-80	1981-82	1982-83
Professors	95.8	96.0	93.3	95.6	96.8	96.9	96.1	96.8	94.9	94.9	91.4	94.4	97.3	95.9	88.3	95.3
Men	95.9	96.2	93.6	95.7	96.9	97.0	96.3	96.9	95.0	95.1	91.5	94.5	97.1	95.8	88.6	95.7
Women	94.8	94.4	91.1	94.3	95.2	95.4	94.6	95.1	94.3	93.4	90.3	94.0	98.1	96.2	87.5	93.9
Assoc. Professor	82.5	82.9	79.8	82.1	82.8	83.9	82.9	83.8	80.9	81.2	77.2	79.8	92.8	89.0	83.1	88.9
Men	82.7	83.3	80.0	82.2	83.1	84.1	82.9	83.8	81.2	81.7	77.4	80.0	92.8	89.4	83.8	89.5
Women	81.8	81.5	79.0	81.7	80.5	82.7	82.7	83.8	80.0	79.2	76.4	79.1	92.7	88.0	81.7	87.7
Ass't. Professor	31.0	28.9	26.1	26.8	17.6	18.0	14.4	14.6	32.2	31.5	27.7	28.4	61.6	57.3	53.4	58.4
Men	29.7	27.5	24.9	26.5	16.1	16.2	12.9	13.2	31.4	30.9	27.1	27.8	63.4	58.6	55.4	60.0
Women	33.7	31.7	28.4	29.2	21.3	22.2	17.8	17.8	33.8	32.7	28.7	29.4	58.7	55.3	50.6	56.0
Instructors	10.0	10.2	8.2	9.0	5.2	6.5	4.8	4.9	8.5	7.9	6.3	6.7	19.4	22.8	16.4	19.9
Men	10.4	10.8	8.6	9.7	5.0	6.4	4.7	4.8	8.7	8.3	6.3	7.0	20.7	24.8	18.5	21.8
Women	9.6	9.6	7.7	8.5	5.4	6.5	4.9	4.9	8.3	7.6	6.3	6.5	18.0	20.8	14.4	18.1
Lecturers	3.0	5.9	10.6	11.0	4.5	8.6	3.6	3.6	0.8	0.8	15.4	16.3	3.3	5.7	30.0	32.3
Men	3.8	6.7	10.6	11.2	5.2	9.4	4.7	4.4	1.3	1.1	14.6	16.4	6.7	10.3	30.4	32.4
Women	2.0	4.9	10.6	10.8	3.4	7.6	2.3	2.7	0.2	0.4	16.4	16.2	1.1	2.4	29.6	32.1
No Academic Rank	73.4	76.3	47.4	77.2	1.3	1.2	0.9	0.7	30.9	28.0	14.5	32.7	75.9	81.0	50.4	81.2
Men	77.0	79.1	50.3	80.1	1.9	1.8	1.6	1.1	33.3	30.2	15.7	36.6	79.7	83.3	53.5	84.0
Women	66.2	70.7	42.4	71.9	0.0	0.0	0.0	0.0	28.4	24.2	12.1	25.8	68.4	73.3	45.0	76.0
All Academic Ranks	62.7	63.6	59.1	65.4	62.4	64.4	64.2	65.5	59.9	59.5	58.2	61.6	70.8	73.3	54.4	75.0
Men	67.5	68.7	64.6	70.4	67.7	69.7	69.7	70.9	64.9	65.3	63.4	67.3	75.3	77.2	58.2	78.9
Women	48.2	48.0	44.1	51.0	38.3	41.7	41.0	42.9	45.2	43.8	43.1	46.4	62.4	65.8	47.9	68.2

Note: 1977-78 figures based on a 67% response, 1979-80 figures based on a 70.3% response.

SOURCE: National Center for Education Statistics, Unpublished Data

TABLE 5-9

NUMBER OF FULL-TIME INSTRUCTIONAL FACULTY AND PERCENT TENURED BY SEX, ACADEMIC RANK AND CONTROL OF INSTITUTION, 1982-83

ACADEMIC RANK	Number of Faculty Members			Percent with Tenure		
	Total	Men	Women	Total	Men	Women
Public Universities						
Professors	35,674	33,409	2,265	97.2	97.3	95.3
Associate Professors	25,937	21,307	4,630	87.0	86.9	87.1
Assistant Professors	21,983	15,241	6,742	16.5	14.7	20.5
Instructors	4,188	1,903	2,285	5.5	5.5	5.5
Lecturers	2,321	1,251	1,070	4.3	5.3	3.2
No Academic Rank	581	364	217	0.9	1.4	0.0
All Ranks Combined	90,684	73,475	17,209	67.5	72.7	45.0
Private Universities						
Professors	13,034	12,119	915	95.8	95.9	94.8
Associate Professors	9,142	7,364	1,778	74.9	74.9	75.0
Assistant Professors	9,165	6,214	2,951	10.3	9.6	11.7
Instructors	1,486	734	752	3.2	3.0	3.3
Lecturers	726	374	352	1.4	1.3	1.4
No Academic Rank	165	90	75	0.0	0.0	0.0
All Ranks Combined	33,718	26,895	6,823	60.3	66.0	37.8
Other Public 4-Yr Institutions						
Professors	36,191	31,603	4,588	95.7	95.7	95.8
Associate Professors	33,465	26,140	7,325	83.3	83.4	83.1
Assistant Professors	30,413	18,950	11,463	34.6	33.8	36.0
Instructors	9,513	4,546	4,967	9.0	9.3	8.8
Lecturers	2,457	1,297	1,160	19.1	19.3	19.0
No Academic Rank	717	452	265	19.4	22.8	13.6
All Ranks Combined	112,756	82,988	29,768	66.1	71.4	51.4
Other Private 4-Yr Institutions						
Professors	18,027	15,721	2,306	91.9	92.1	90.3
Associate Professors	17,960	13,761	4,199	73.2	73.5	72.1
Assistant Professors	19,650	12,154	7,496	18.8	18.5	19.3
Instructors	6,157	2,982	3,175	3.2	3.6	2.9
Lecturers	449	238	211	0.9	0.8	0.9
No Academic Rank	1,167	753	414	40.9	44.9	33.6
All Ranks Combined	63,410	45,609	17,801	53.7	59.8	38.1
Public 2-Yr Institutions						
Professors	6,231	4,748	1,483	95.7	96.0	94.7
Associate Professors	8,947	6,007	2,940	89.1	89.8	87.9
Assistant Professors	9,269	5,418	3,851	59.0	60.7	56.7
Instructors	5,190	2,559	2,631	20.3	22.2	18.4
Lecturers	337	143	194	32.6	32.9	32.5
No Academic Rank	35,087	22,742	12,345	81.7	84.4	76.7
All Ranks Combined	65,061	41,617	23,414	75.9	79.4	69.0
Private 2-Yr Institutions						
Professors	175	115	60	78.9	81.7	73.3
Associate Professors	206	139	67	77.2	77.0	77.6
Assistant Professors	275	126	149	35.6	31.7	38.9
Instructors	322	139	183	13.7	14.4	13.1
Lecturers	4	2	2	0.0	0.0	0.0
No Academic Rank	741	449	292	56.7	62.4	47.9
All Ranks Combined	1,723	970	753	49.9	55.8	42.2
All Institutions, Public & Private						
Professors	109,332	97,715	11,617	95.6	95.7	94.3
Associate Professors	95,657	74,717	20,939	82.1	82.2	81.7
Assistant Professors	90,755	58,103	32,652	26.8	25.5	29.2
Instructors	26,856	12,863	13,993	9.0	9.7	8.5
Lecturers	6,294	3,305	2,989	11.0	11.2	10.8
No Academic Rank	38,458	24,850	13,608	77.2	80.1	71.9
All Ranks Combined	367,352	271,554	95,798	65.4	70.4	51.0

Note: Includes only institutions reporting tenured faculty members.

SOURCE: Academic Science: Scientists and Engineers, January 1981, Detailed Statistical Tables, NSF 82-305,...January 1982, NSF 83-311, ...January 1984, NSF 85-316, and Summary Tables, January 1985, unpublished, National Science Foundation

TABLE 5-10

NUMBER AND PERCENT OF SCIENTISTS AND ENGINEERS EMPLOYED FULL TIME IN COLLEGES AND UNIVERSITIES BY FIELD OF EMPLOYMENT AND SEX, SELECTED YEARS, JANUARY 1974 - 1985

FIELD	1974			1978			1980			1982			1984			1985		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
ENGINEERS	22,764	339	1.5	24,666	598	2.4	26,472	713	2.7	28,049	875	3.1	29,435	1,109	3.8	30,078	1,253	4.2
Aero. & Astro.	1,023	22	2.1	964	18	1.9	1,144	27	2.4	1,083	21	1.9	1,138	23	2.0	1,212	23	1.9
Chemical	1,522	22	1.4	1,725	33	1.9	1,886	59	3.1	1,911	96	5.0	2,043	113	5.5	2,159	125	5.8
Civil	3,759	61	1.6	4,240	128	3.0	4,325	118	2.7	4,736	166	3.5	4,884	208	4.3	5,084	250	4.9
Electrical	5,404	57	1.1	5,593	91	1.6	6,374	114	1.8	6,811	136	2.0	7,303	194	2.7	7,742	239	3.1
Mechanical	4,255	33	0.8	4,523	61	1.3	4,817	92	1.9	5,094	98	1.9	5,411	98	1.8	5,543	112	2.0
Other	6,801	144	2.1	7,612	267	3.5	7,926	303	3.8	8,414	358	4.3	8,656	473	5.5	8,338	504	6.0
ALL SCIENCES	*	*	*	217,504	38,362	17.6	228,518	43,502	19.0	240,564	50,076	20.8	252,126	56,197	22.3	257,518	59,458	23.1
PHYSICAL SCIENTISTS	26,849	1,939	7.2	27,902	2,451	8.8	27,993	2,491	8.9	28,505	2,668	9.4	29,030	2,887	9.9	29,458	2,970	10.1
Chemists	14,075	1,385	9.8	14,736	1,724	11.7	14,330	1,779	12.4	14,800	1,898	12.8	15,133	2,017	13.3	15,076	2,098	13.9
Physicists	10,870	395	3.6	11,254	483	4.3	11,223	492	4.3	11,154	511	4.6	11,531	580	5.0	11,888	613	5.2
Astronomers	†	†	-	†	†	-	818	68	8.3	1,060	81	7.6	952	71	7.5	1,047	82	7.8
Other	1,904	159	8.4	1,912	244	12.8	1,522	152	10.0	1,491	178	11.9	1,414	219	15.5	1,448	178	12.3
ENVIRONMENTAL SCIENTISTS	6,563	327	5.0	8,181	569	7.0	8,333	660	7.9	8,568	809	9.4	8,933	836	9.4	8,975	892	9.9
Atmospheric Scientists	571	39	6.8	821	35	4.3	793	44	5.5	761	50	6.6	805	54	6.7	857	59	6.9
Earth Scientists	4,957	229	4.6	5,963	411	6.9	5,554	398	7.2	5,670	456	8.0	5,713	452	7.9	5,674	461	8.1
Oceanographers	1,035	59	5.7	1,397	123	8.8	1,385	127	9.2	1,394	199	14.3	1,538	241	15.7	1,519	242	15.9
Other	†	†	-	†	†	-	601	91	15.1	743	104	14.0	877	89	10.2	925	130	14.1
MATH/COMPUTER SCIENTISTS	22,260	2,925	13.1	24,349	3,475	14.3	26,030	4,085	15.7	28,322	4,861	17.2	31,940	5,968	18.7	32,979	6,380	19.3
Mathematicians	18,532	2,479	13.4	19,564	2,915	14.9	19,914	3,176	15.9	20,559	3,518	17.1	21,407	3,891	18.2	21,773	4,039	18.6
Computer Scientists*	3,728	446	12.0	4,785	560	11.7	6,116	909	14.9	7,763	1,343	17.3	10,533	2,077	19.7	11,206	2,341	20.9
LIFE SCIENTISTS	88,801	18,045	20.3	97,726	19,950	20.4	108,155	24,101	22.3	115,214	28,661	24.9	122,689	33,925	27.7	127,017	36,063	28.4
Agricultural Scientists	12,785	1,550	12.1	13,704	1,239	9.0	14,440	1,327	9.2	14,716	1,477	10.0	15,572	1,808	11.7	15,586	2,040	13.1
Biological Scientists	32,142	6,319	19.7	37,661	7,791	20.7	38,714	8,217	21.2	40,175	9,123	22.7	41,579	9,853	23.7	42,686	10,452	24.5
Medical Scientists	43,874	10,176	23.2	46,361	10,920	23.6	50,316	11,715	23.3	53,009	13,239	25.0	54,506	14,063	25.8	57,544	15,298	26.6
Other	†	†	-	†	†	-	4,685	2,842	60.7	7,314	4,822	65.9	11,032	8,201	74.3	11,200	8,272	73.9
PSYCHOLOGISTS	14,957	3,188	21.3	17,406	4,314	24.8	16,733	4,318	25.8	16,767	4,450	26.5	17,087	4,491	26.3	16,691	4,698	28.1
SOCIAL SCIENTISTS	36,620	5,768	15.8	41,836	7,584	18.1	41,154	7,829	19.0	41,638	8,109	19.5	42,447	8,090	19.1	42,396	8,454	19.9
Economists	9,830	788	8.0	10,854	968	8.9	11,092	1,110	10.0	11,402	1,198	10.5	12,122	1,319	10.9	11,907	1,355	11.4
Sociologists	10,048	2,376	23.6	9,055	1,079	11.9	8,767	1,112	12.7	9,187	1,283	14.0	10,208	2,711	26.6	10,166	2,703	26.6
Political Scientists	8,396	863	10.3	11,502	3,027	26.3	10,860	2,940	27.1	10,779	3,038	28.2	9,139	1,241	13.6	9,177	1,325	14.4
Other Social Scientists	8,346	1,741	20.9	10,425	2,510	24.1	10,435	2,667	25.6	10,270	2,590	25.2	10,987	2,819	25.7	11,146	3,071	27.6
TOTAL	218,407	32,124	14.7	242,066	38,941	16.1	254,870	44,197	17.3	267,063	50,433	18.9	281,561	57,306	20.4	287,596	60,711	21.1

† Data not available prior to 1980. * Excluding programmers.

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1984, NSF 85-316, and Summary Tables, January 1985, National Science Foundation

TABLE 5-11

SCIENTISTS AND ENGINEERS EMPLOYED BY UNIVERSITIES AND COLLEGES BY FIELD, EMPLOYMENT STATUS AND SEX, JANUARY 1980-1985

FIELD OF EMPLOYMENT	MALE						FEMALE					
	FULL-TIME			PART-TIME			FULL-TIME			PART-TIME		
	1980	1982	1985	1980	1982	1985	1980	1982	1985	1980	1982	1985
TOTAL	210,775	217,094	226,885	51,816	60,441	66,875	44,215	50,677	60,711	17,443	21,098	25,889
ENGINEERS	25,759	27,090	28,825	6,987	8,027	9,267	713	860	1,253	278	358	516
Aeronautical and Astronautical Engineers	1,117	1,064	1,189	248	229	298	27	20	23	15	10	19
Chemical Engineers	1,827	1,820	2,034	445	327	437	59	90	253	21	26	32
Civil Engineers	4,207	4,572	4,834	1,167	1,287	1,463	118	167	250	37	65	108
Electrical Engineers	6,260	6,657	7,503	1,751	2,186	2,945	114	132	239	29	61	112
Mechanical Engineers	4,725	4,948	5,431	1,228	1,548	1,607	92	90	112	29	51	71
Other Engineers	7,623	8,029	7,834	2,148	2,450	2,517	303	361	504	147	145	175
PHYSICAL SCIENTISTS	25,502	25,889	26,486	4,237	4,602	5,554	2,491	2,649	2,907	1,324	1,323	1,492
Astronomers	750	932	965	117	166	254	68	74	82	20	31	38
Chemists	12,551	12,728	12,978	2,245	2,418	2,830	1,779	1,897	2,098	1,039	985	1,145
Physicists	10,831	10,915	11,275	1,524	1,651	2,032	492	510	613	160	192	222
Other Physical Scientists	1,370	1,314	1,270	351	367	437	152	168	178	105	115	87
ENVIRONMENTAL SCIENTISTS	7,775	7,853	8,083	1,210	1,192	1,301	678	815	892	297	335	419
Atmospheric Scientists	749	712	798	136	114	142	44	50	59	14	10	31
Earth Scientists	5,156	5,214	5,213	832	798	776	398	450	461	183	216	225
Oceanographers	1,343	1,272	1,277	125	119	141	145	211	242	50	37	53
Other Environmental Scientists	527	654	795	117	161	243	91	104	130	50	72	110
MATHEMATICAL AND COMPUTER SCIENTISTS	21,945	23,503	26,599	7,120	10,130	13,040	4,085	4,877	6,380	2,807	3,787	5,092
Mathematicians	16,738	17,044	17,734	4,725	6,302	7,552	3,176	3,522	4,039	2,440	3,075	3,744
Computer Scientists	5,207	6,459	8,865	2,395	3,828	5,488	909	1,355	2,341	367	712	1,348
LIFE SCIENTISTS	84,054	86,780	90,954	19,018	22,048	23,088	24,101	28,931	36,063	6,529	8,578	11,624
Agricultural Scientists	13,113	13,197	13,546	1,112	1,402	1,457	1,327	1,466	2,040	287	380	485
Biological Scientists	30,497	31,049	32,234	3,804	4,077	4,651	8,217	9,110	10,452	2,285	2,503	3,209
Medical Scientists	38,601	39,926	42,246	13,483	15,634	15,878	11,715	13,159	15,298	3,317	4,268	5,251
Other Life Scientists	1,843	2,608	2,928	559	935	1,102	2,842	5,196	8,272	640	1,427	2,679
PHYCHOLOGISTS	12,415	12,348	11,993	3,844	4,125	4,153	4,318	4,448	4,698	2,680	2,776	2,940
SOCIAL SCIENTISTS	33,325	33,631	33,942	9,400	10,317	10,472	7,829	8,097	8,454	3,528	3,941	3,805
Economists	9,982	10,254	10,552	3,049	3,449	3,308	1,110	1,199	1,355	531	553	574
Political Scientists	7,655	7,894	7,852	1,934	2,112	2,044	1,112	1,279	1,325	493	547	533
Sociologists	7,920	7,734	7,463	2,221	2,333	2,155	2,940	3,028	2,703	1,420	1,543	1,346
Other Social Scientists	7,768	7,749	8,075	2,196	2,423	2,965	2,667	2,591	3,071	1,084	1,298	1,354

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1984, National Science Foundation, NSF 85-316

TABLE 5-12

SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY EMPLOYMENT STATUS, TYPE OF INSTITUTION, CONTROL AND SEX, 1984

TYPE OF INSTITUTION AND CONTROL	FULL TIME			PART TIME			% OF ALL WOMEN			% OF ALL MEN		
	Total	Women	% W	Total	Women	% W	Total	Full Time	Part Time	Total	Full Time	Part Time
ALL INSTITUTIONS	281,561	57,306	20.4	88,889	24,707	27.8	100.0	100.0	100.0	100.0	100.0	100.0
Public	196,754	40,023	20.3	58,070	17,147	29.5	69.7	69.8	69.4	68.5	69.9	63.8
Private	84,807	17,283	20.4	30,819	7,560	25.5	30.3	30.2	30.6	31.5	30.1	36.2
INSTITUTIONS GRANTING DOCTORATE IN S/E	197,508	38,041	19.3	46,778	11,955	25.6	61.0	66.4	48.4	67.4	71.1	54.3
Public	136,067	26,374	19.4	28,239	8,217	29.1	42.2	46.0	33.3	45.0	48.9	31.2
Private	61,441	11,667	19.0	18,539	3,738	20.2	18.8	20.3	15.1	22.4	22.2	23.1
MASTER'S IN S/E	32,822	6,582	20.1	11,921	3,726	31.3	12.6	11.5	15.1	11.9	11.7	12.8
Public	25,743	5,084	19.8	7,486	2,352	31.4	9.1	8.9	9.5	8.9	9.2	8.0
Private	7,079	1,498	21.2	4,435	1,374	31.0	3.5	2.6	5.6	3.0	2.5	4.8
BACHELOR'S IN S/E	21,913	5,007	23.0	7,999	2,539	31.7	9.2	8.7	10.3	7.7	7.5	8.5
Public	7,080	1,198	16.9	999	350	35.0	1.9	2.1	1.4	2.3	2.6	1.0
Private	14,733	3,809	25.9	7,000	2,189	31.3	7.3	6.6	8.9	5.4	4.9	7.5
OTHER DEGREES	476	13	2.7	69	18	26.1	0.04	0.02	0.07	0.2	0.2	1.08
Public	283	6	2.1	43	2	4.7	0.01	0.01	0.01	0.1	0.1	0.06
Private	193	7	3.6	26	16	61.5	0.03	0.01	0.06	0.1	0.1	0.02
TWO-YR INSTITUTIONS	28,942	7,663	26.5	22,122	6,469	6.6	17.2	13.4	26.2	12.8	9.5	24.4
Public	27,581	7,361	26.7	21,303	6,226	29.2	16.6	12.9	25.2	12.2	9.0	23.5
Private	1,361	302	22.2	819	243	29.7	0.7	0.5	1.0	0.6	0.5	0.9

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1984, National Science Foundation, NSF 85-316

TABLE 5-13

NUMBER AND PERCENT WOMEN AMONG FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT TOP 25*UNIVERSITIES AND COLLEGES, BY FIELD, 1984

INSTITUTION BY RANK	Total S/E Employ.	Total Women	PERCENT WOMEN							
			All S/E Fields	Engr.	Phys. Sci.	Env. Sci.	Math/ Comp. Sci.	Life Sci.	Psy-cho-logy	Soc. Sci.
Harvard	4,716	963	20.4	0.0	7.4	8.2	17.5	21.8	35.7	12.7
Wisconsin, Madison	3,121	763	24.4	10.2	4.5	12.7	8.6	30.5	36.7	28.0
Louisiana State	2,749	728	26.5	1.9	5.8	18.6	22.6	31.2	23.7	20.0
UCLA	2,133	600	28.1	12.5	15.1	11.9	9.1	34.4	25.7	26.4
Pittsburgh	1,968	561	28.5	5.4	8.9	5.6	26.9	34.7	38.4	23.3
Johns Hopkins	3,405	540	15.9	2.2	6.8	14.3	18.4	25.7	25.9	28.5
U. Calif., S.F.	1,450	539	37.2	0.0	0.0	0.0	0.0	37.2	0.0	0.0
Ohio State	2,537	532	21.0	4.3	11.2	9.5	9.4	27.7	23.2	17.7
Michigan	2,414	530	22.0	5.5	13.3	5.4	8.0	28.0	26.2	29.3
Minnesota	2,965	529	17.8	2.5	6.8	2.5	11.0	21.2	25.0	17.3
Columbia	1,955	510	26.1	3.9	6.7	21.2	4.9	32.5	50.0	21.3
Mass. Inst. of Technology	2,706	493	18.2	7.9	8.8	16.2	9.9	40.0	46.8	15.7
Cornell	2,442	480	19.7	5.3	7.3	15.2	14.7	22.5	38.8	24.7
Kansas	1,452	476	32.8	2.5	11.6	15.2	15.3	40.2	51.6	22.1
Florida	2,385	455	19.1	2.1	2.0	4.8	8.2	23.6	18.6	15.7
Yale	1,785	444	24.9	4.4	7.5	0.0	11.1	30.1	33.3	8.5
Indiana	1,703	414	24.3	8.3	7.6	7.3	10.5	33.8	21.4	19.6
Kentucky	1,920	402	20.9	2.5	15.9	13.0	29.5	24.1	34.2	14.2
Illinois, Urbana	2,175	369	17.0	4.8	11.1	16.2	17.3	21.8	28.7	19.4
U. Wahington	1,854	367	19.8	5.7	5.3	11.5	10.2	27.1	25.5	21.6
Iowa	1,730	354	20.5	1.4	4.9	7.1	9.0	24.6	20.0	16.2
Wash. U., St. Louis	1,609	339	21.1	0.0	4.8	10.0	12.1	24.6	13.6	8.2
Illinois, Chicago & Med. Center	1,163	323	27.8	0.0	10.4	6.3	13.5	37.1	15.8	27.0
Duke	1,503	320	21.3	6.0	6.5	23.1	7.1	23.5	20.0	20.0
U. Calif., Davis	1,674	318	19.0	6.4	0.0	6.6	14.3	20.3	25.0	23.3
TOTAL, All Schools	281,561	57,306	20.4	3.8	9.9	9.4	18.7	27.7	26.3	19.1

*Ranked in order or number of women scientists/engineers employed. This list omits the University of Texas Health Science Centers in Dallas and Houston, and its Cancer Center, ranked 21, 23, and 25 respectively, for lack of detailed information on faculty field. Also omitted for the same reason is the U. of MD-Baltimore Professional School, ranked 22 in number of women employed in science and engineering.

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1985, Summary Tables, National Science Foundation, 1986

TABLE 5-14

FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES, BY FIELD OF SCIENCE AND SEX, JANUARY 1985

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	200355	42243	22284	1010	19368	1919	7291	701	24525	4767	84461	24521	11856	3297	30571	6028
1 UNIV OF WIS-MADISON	3247	813	318	32	206	9	208	30	206	19	1838	577	161	60	310	86
2 LOUISIANA STATE UNIV	3026	982	179	7	130	6	127	36	168	47	2230	868	37	9	155	29
3 UNIVERSITY OF MINNESOTA	2919	505	243	16	152	14	40	2	158	13	1710	322	104	31	512	107
4 OHIO STATE UNIVERSITY	2872	782	302	18	235	26	37	3	167	20	1734	614	57	11	340	90
5 UNIVERSITY OF MICHIGAN	2634	670	343	29	275	38	63	7	110	14	1387	434	146	54	310	94
6 UNIVERSITY OF FLORIDA	2496	498	279	13	103	3	24	2	79	10	1791	435	41	8	179	27
7 TEXAS A & M UNIVERSITY	2430	182	407	10	112	5	91	6	153	13	1132	69	55	12	480	67
8 UNIV OF ILL URBANA	2173	387	391	24	258	24	129	27	198	34	770	172	143	46	284	60
9 PENNSYLVANIA STATE UNIV	2157	276	628	25	199	14	90	4	209	49	751	140	76	18	204	24
10 UNIV OF CAL LOS ANGELES	2115	599	230	34	183	28	82	10	71	7	1271	442	75	23	203	55
TOTAL, 1ST 10 INSTS.	26069	5694	3320	208	1853	167	891	127	1519	226	14614	4053	895	272	2977	641
11 UNIVERSITY OF PITTSBURGH	2104	618	143	9	163	19	17	1	206	64	1250	431	93	38	232	56
12 PURDUE UNIVERSITY	2083	304	538	19	246	18	30	1	245	47	724	176	91	20	209	23
13 UNIVERSITY OF WASHINGTON	1928	362	305	14	141	6	155	22	92	8	1011	261	52	15	172	36
14 UNIVERSITY OF KENTUCKY	1920	402	161	4	138	22	44	7	156	46	1089	262	76	26	246	35
15 MICHIGAN STATE UNIVERSITY	1904	378	106	6	193	22	59	1	112	12	974	248	106	25	354	64
16 N C STATE UNIV AT RALEIGH	1760	186	340	16	98	11	31	1	148	22	952	107	21	5	170	24
17 UNIVERSITY OF IOWA	1754	387	73	1	101	8	17	3	92	7	1266	330	35	6	170	32
18 UNIV OF CAL DAVIS	1702	339	93	6	66	5	18	1	50	6	1365	295	20	5	90	21
19 UNIV OF TEXAS AT AUSTIN	1684	269	266	11	387	34	175	22	247	38	206	59	107	30	296	75
20 INDIANA UNIVERSITY	1661	420	42	4	181	16	104	6	120	11	897	313	113	23	204	47
TOTAL, 1ST 20 INSTS.	44569	9359	5387	298	3567	328	1551	192	2987	487	24348	6535	1609	465	5120	1054
21 UNIV OF CAL BERKELEY	1548	281	342	30	250	27	20	2	81	8	619	146	46	17	190	51
22 RUTGERS THE ST UNIV OF NJ	1510	312	114	6	159	23	64	4	229	31	417	84	129	42	398	122
23 UNIV OF CAL SAN FRANCISCO	1485	563	0	0	0	0	0	0	0	0	1485	563	0	0	0	0
24 UNIVERSITY OF ARIZONA	1479	240	172	1	207	12	98	2	90	11	638	163	82	21	192	30
25 IOWA ST U OF SCI & TECH	1464	196	364	44	118	9	16	0	165	23	593	84	27	4	181	32
26 SUNY AT BUFFALO	1437	492	216	42	83	15	17	3	113	27	780	338	71	22	157	45
27 UNIV OF MD COLLEGE PARK	1426	263	234	15	346	49	39	4	185	30	361	99	67	21	194	45
28 UNIVERSITY OF KANSAS	1420	425	111	1	64	5	64	8	66	7	806	291	158	75	151	38
29 UNIVERSITY OF CINCINNATI	1378	316	143	18	74	6	16	2	105	23	878	235	33	6	129	26
30 UNIV OF NC AT CHAPEL HILL	1348	253	39	1	91	9	25	1	60	2	928	197	50	14	155	29
TOTAL, 1ST 30 INSTS.	59064	12700	7122	456	4959	483	1910	218	4081	649	31853	8735	2272	687	6867	1472
31 UNIVERSITY OF OKLAHOMA	1282	260	197	14	106	17	53	2	91	16	591	148	26	5	218	58
32 UNIV OF ILL CHICAGO	1263	419	91	0	95	11	21	1	91	11	775	338	40	10	150	48
33 NEW MEXICO STATE UNIV	1259	230	293	6	87	11	17	0	198	55	377	66	81	30	206	62
34 UNIVERSITY OF CONNECTICUT	1251	300	114	4	62	5	34	4	83	10	653	182	107	34	198	61
35 UNIV OF CAL SAN DIEGO	1239	278	29	4	140	14	280	57	83	7	608	174	30	9	69	13
36 UNIVERSITY OF UTAH	1223	247	142	10	129	7	35	5	93	4	676	184	30	7	118	30
37 UNIV OF MISSOURI COLUMBIA	1200	209	116	11	64	4	25	0	80	11	738	143	32	7	145	33
38 UNIV ALABAMA BIRMINGHAM	1197	205	31	4	32	2	10	1	35	5	992	174	42	8	55	11
39 SUNY AT STONY BROOK	1188	267	70	3	193	16	67	10	96	12	596	187	57	17	109	22
40 UNIVERSITY OF GEORGIA	1149	114	29	0	72	2	52	4	87	12	675	65	62	10	172	21
TOTAL, 1ST 40 INSTS.	71315	15229	8234	512	5939	572	2504	302	5018	792	38534	10396	2779	824	8307	1831
41 GEORGIA INSTITUTE OF TECH	1119	66	697	31	170	5	30	0	136	21	25	2	12	1	49	6
42 AUBURN UNIVERSITY	1091	142	227	11	64	5	10	0	117	20	484	74	39	14	150	18
43 OREGON STATE UNIVERSITY	1088	132	136	2	103	10	134	10	75	4	547	87	10	4	83	15
44 WEST VIRGINIA UNIVERSITY	1070	217	111	3	34	1	16	1	58	12	364	67	20	3	467	130
45 TEMPLE UNIVERSITY	1068	246	30	2	49	2	9	1	96	14	631	164	77	19	176	44
46 UNIVERSITY OF VIRGINIA	1056	195	121	6	101	7	30	0	81	13	601	148	34	11	88	10
47 WAYNE STATE UNIVERSITY	1050	300	64	22	79	19	7	1	82	23	654	195	36	6	128	34
48 VA POLYTECH INST & ST U	1045	67	306	6	87	2	25	2	91	13	414	30	19	4	103	10
49 UNIV OF HAWAII-MANOA	1041	239	57	2	98	8	93	10	58	4	509	165	33	9	193	41
50 COLORADO STATE UNIVERSITY	1040	150	147	8	56	3	85	11	87	5	492	87	46	17	127	19
TOTAL, 1ST 50 INSTS.	81983	16983	10130	605	6780	634	2943	338	5899	921	43255	11415	3105	912	9871	2158
TOTAL, ALL OTHER SAMPLED INSTS.	101390	21642	10710	366	10312	1048	3754	317	14786	3017	37178	11584	7234	1969	17416	3341
ESTIMATED TOTAL, NON-SAMPLED INSTS.	16982	3618	1444	39	2276	237	594	46	3840	829	4028	1522	1517	416	3284	529

SOURCE: Academic Science/Engineering: Scientists and Engineers, January 1985, Summary Tables, National Science Foundation, 1986

TABLE 5-15

FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES, BY FIELD OF SCIENCE AND SEX, JANUARY 1985

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	87240	18468	7794	243	10090	1052	1685	191	8454	1613	42557	11543	4834	1400	11825	2426
1 HARVARD UNIVERSITY	4989	1073	41	0	239	14	44	3	59	10	4401	1013	38	9	167	24
2 JOHNS HOPKINS UNIVERSITY	3629	607	1040	25	403	24	33	2	225	48	1725	452	25	5	178	51
3 CORNELL UNIVERSITY	2440	476	317	14	225	15	29	6	70	12	1409	316	119	49	271	64
4 MASS INST OF TECHNOLOGY	2195	337	632	44	555	42	137	20	167	13	428	156	59	28	217	34
5 COLUMBIA UNIV MAIN DIV	2048	552	106	2	124	10	181	39	70	2	1279	427	19	7	269	65
6 YALE UNIVERSITY	1821	481	49	3	119	7	34	1	67	10	1372	433	40	14	140	13
7 WASHINGTON UNIVERSITY	1641	359	54	0	86	6	17	4	82	13	1305	323	31	5	66	6
8 UNIV OF PENNSYLVANIA	1543	278	86	3	99	6	6	0	79	9	1036	226	21	4	216	30
9 UNIV OF SOUTHERN CAL	1493	278	207	7	122	13	25	2	53	2	924	214	46	5	116	35
10 DUKE UNIVERSITY	1464	257	52	2	91	8	42	13	41	4	1127	213	22	4	89	13
TOTAL, 1ST 10 INSTS.	23263	4698	2584	100	2063	145	548	92	913	123	15006	3773	420	130	1729	335
11 NEW YORK UNIVERSITY	1433	269	24	0	78	4	0	0	154	11	905	189	82	24	190	41
12 CASE WESTERN RESERVE UNIV	1355	288	134	9	76	4	8	0	43	4	1044	261	15	4	35	6
13 UNIVERSITY OF MIAMI	1344	370	72	0	34	0	82	8	61	12	1005	338	34	4	56	8
14 UNIVERSITY OF CHICAGO	1258	235	46	1	171	12	41	2	64	3	771	191	45	14	120	12
15 NORTHWESTERN UNIVERSITY	1246	231	143	5	151	13	14	2	110	6	597	164	58	13	173	28
16 UNIVERSITY OF ROCHESTER	1132	173	43	1	149	6	7	0	44	2	786	152	36	5	67	7
17 STANFORD UNIVERSITY	1074	116	251	11	145	6	35	3	90	5	441	72	22	6	90	13
18 HOWARD UNIVERSITY	1073	293	62	0	43	5	5	0	59	10	795	251	20	2	89	25
19 CUNY MT SINAI SCH OF MED	992	250	6	0	9	1	0	0	2	0	973	249	2	0	0	0
20 VANDERBILT UNIVERSITY	903	146	57	3	74	4	9	2	56	6	575	108	71	19	61	4
TOTAL, 1ST 20 INSTS.	35073	7069	3422	130	2993	200	749	109	1596	182	22898	5748	805	221	2610	479
21 GEORGETOWN UNIVERSITY	899	266	0	0	28	1	0	0	14	1	770	245	12	2	75	17
22 BOSTON UNIVERSITY	897	211	52	3	68	6	6	0	47	6	579	156	33	13	112	27
23 YESHIVA UNIVERSITY	867	200	5	0	60	13	0	0	13	3	689	152	49	18	51	14
24 BAYLOR COL OF MEDICINE	866	196	0	0	0	0	0	0	0	0	866	196	0	0	0	0
25 MAYO GRAD SCHOOL OF MED	825	205	0	0	0	0	0	0	0	0	825	205	0	0	0	0
26 NORTHEASTERN UNIVERSITY	672	182	154	6	107	6	9	1	80	23	181	105	32	10	109	31
27 GEORGE WASHINGTON UNIV	652	137	66	0	39	0	7	0	78	18	346	98	23	6	93	15
28 NEW YORK MEDICAL COLLEGE	599	161	0	0	0	0	0	0	0	0	599	161	0	0	0	0
29 SYRACUSE UNIVERSITY	594	126	116	4	134	19	12	1	81	13	113	62	34	5	104	22
30 BRIGHAM YOUNG UNIVERSITY	589	71	85	0	61	1	21	1	138	16	139	37	44	6	101	10
TOTAL, 1ST 30 INSTS.	42533	8824	3900	143	3490	246	804	112	2047	262	28005	7165	1032	281	3255	615
31 TUFTS UNIVERSITY	567	102	43	2	33	2	13	3	33	4	385	72	15	4	45	15
32 MEDICAL COLLEGE OF WIS	552	194	21	0	48	15	0	0	14	7	469	172	0	0	0	0
33 TULANE UNIVERSITY	552	60	39	1	22	0	8	2	43	3	338	41	25	3	77	10
34 CARNEGIE-MELLON UNIV	548	67	147	7	77	5	0	0	146	9	57	24	42	17	79	5
35 ROCKEFELLER UNIVERSITY	523	109	0	0	34	3	0	0	6	0	431	91	52	15	0	0
36 WAKE FOREST UNIVERSITY	522	60	1	0	24	1	0	0	20	1	418	44	23	7	36	7
37 CALIFORNIA INST OF TECH	519	48	123	1	224	14	55	7	22	0	75	25	0	0	20	1
38 PRINCETON UNIVERSITY	507	67	93	7	140	12	48	7	49	3	46	16	22	3	109	19
39 ST LOUIS UNIVERSITY	500	107	15	0	16	3	14	0	11	1	400	96	16	3	28	4
40 BRANDEIS UNIVERSITY	486	133	0	0	80	9	0	0	50	7	144	50	36	10	176	57
TOTAL, 1ST 40 INSTS.	47809	9771	4382	161	4188	310	942	131	2441	297	30768	7796	1263	343	3825	733
41 THOMAS JEFFERSON UNIV	447	121	0	0	0	0	0	0	2	0	437	120	8	1	0	0
42 LOYOLA UNIV - CHICAGO	441	80	0	0	25	1	0	0	23	3	303	58	32	4	58	14
43 RENSSELAER POLYTECH INST	399	28	205	7	76	4	8	0	66	9	15	3	10	2	19	3
44 RUSH UNIVERSITY	397	53	0	0	0	0	0	0	0	0	370	46	27	7	0	0
45 BROWN UNIVERSITY	396	49	52	0	71	5	25	3	65	3	95	24	22	3	66	11
46 UNIVERSITY OF NOTRE DAME	374	39	74	2	129	15	7	0	33	2	42	6	22	6	67	8
47 DARTMOUTH COLLEGE	373	65	34	2	41	1	10	1	27	2	186	38	29	11	46	10
48 UNIVERSITY OF DAYTON	341	18	126	2	88	2	4	1	49	3	22	4	24	2	28	4
49 MANNEMANN UNIVERSITY	337	62	2	0	9	0	0	0	1	0	298	57	24	4	3	1
50 LONG ISLAND UNIVERSITY	325	86	0	0	42	3	16	3	46	9	114	45	30	9	77	17
TOTAL, 1ST 50 INSTS.	51639	10372	4875	174	4669	341	1012	139	2753	328	32650	8197	1491	392	4189	801
TOTAL, ALL OTHER SAMPLED INSTS.	22376	4779	2293	57	3123	380	477	43	3220	679	6956	2117	1941	584	4366	919
ESTIMATED TOTAL, NON-SAMPLED INSTS.	13225	3317	626	12	2298	331	196	9	2481	606	2951	1229	1402	424	3270	706

SOURCE: Academic Science/Engineering: Graduate Enrollment and Support, Fall 1983, NSF 85-300, National Science Foundation

TABLE 5-16

SCIENCE/ENGINEERING POSTDOCTORATES AND OTHER NON-FACULTY RESEARCH STAFF IN ALL GRADUATE INSTITUTIONS, BY FIELD AND SEX, 1983

FIELD	POSTDOCTORATES			OTHER NON-FACULTY DOCTORAL RESEARCH STAFF		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
TOTAL, ALL FIELDS	20,829	16,017	4,812	4,936	3,947	989
ENGINEERING	1,313	1,025	88	631	596	35
AEROSPACE	32	32	0	24	24	0
AGRICULTURAL	4	4	0	4	4	0
BIOMEDICAL	28	24	4	11	9	2
CHEMICAL	198	172	26	50	43	7
CIVIL	131	125	6	86	83	3
ELECTRICAL	184	172	12	127	120	7
ENGINEERING SCIENCE	71	68	3	36	32	4
INDUSTRIAL	14	12	2	10	9	1
MECHANICAL	182	176	6	128	125	3
METALLURGICAL/MATERIALS	204	180	24	94	89	5
MINING	19	19	0	3	3	0
NUCLEAR	15	14	1	29	27	2
PETROLEUM	1	0	1	4	4	0
ENGINEERING, N.E.C.	30	27	3	25	24	1
PHYSICAL SCIENCES	4,458	3,921	537	759	680	79
ASTRONOMY	111	93	18	67	62	5
CHEMISTRY	2,989	2,559	430	308	257	51
PHYSICS	1,354	1,266	88	383	361	22
PHYSICAL SCIENCES, N.E.C.	4	3	1	1	0	1
ENVIRONMENTAL SCIENCES	419	357	62	301	280	21
ATMOSPHERIC SCIENCES	41	37	4	47	46	1
GEOSCIENCES	240	212	28	126	115	11
OCEANOGRAPHY	121	92	29	115	107	8
ENVIRONMENTAL SCIENCES, N.E.C.	17	16	1	13	12	1
MATHEMATICAL/COMPUTER SCIENCES	252	226	26	186	172	14
COMPUTER SCIENCE	82	72	10	61	59	2
MATHEMATICS AND APPLIED MATHEMATICS	137	126	11	119	109	10
STATISTICS	33	28	5	6	4	2
LIFE SCIENCES	13,789	9,986	3,803	2,686	1,960	726
AGRICULTURAL SCIENCES	298	244	54	173	162	11
BIOLOGICAL SCIENCES	8,417	6,001	2,416	1,583	1,127	456
ANATOMY	297	210	87	60	41	19
BIOCHEMISTRY	1,786	1,281	505	283	198	85
BIOLOGY	1,009	682	327	324	206	118
BIOMETRY/EPIDEMIOLOGY	54	31	23	23	20	3
BIOPHYSICS	184	135	49	24	18	6
BOTANY	269	272	97	72	65	7
CELL BIOLOGY	620	436	184	41	23	18
ECOLOGY	39	37	2	9	6	3
ENTOMOLOGY/PARASITOLOGY	112	93	19	61	52	9
GENETICS	344	219	125	40	28	12
MICROBIOLOGY	1,017	710	307	146	101	45
NUTRITION	151	105	46	49	36	13
PATHOLOGY	584	398	186	75	51	24
PHARMACOLOGY	801	602	199	158	115	43
PHYSIOLOGY	773	590	183	157	121	36
ZOOLOGY	202	144	58	41	34	7
BIOSCIENCES, N.E.C.	74	55	19	20	12	8
HEALTH SCIENCES	5,074	3,741	1,333	930	671	259
ANESTHESIOLOGY	59	44	15	7	5	2
CANCER/ONCOLOGY	157	106	51	48	37	11
CARDIOLOGY	336	287	49	57	44	13
DENTISTRY	197	156	41	81	78	3
ENDOCRINOLOGY	173	122	51	6	4	2
GASTROENTEROLOGY	148	135	13	12	5	7
HEMATOLOGY	154	104	50	4	1	3
NEUROLOGY	301	216	85	45	34	11
NURSING	6	1	5	7	4	3
OBSTETRICS/GYNECOLOGY	116	81	35	12	9	3
OPHTHALMOLOGY	137	92	45	10	9	1
OTORHINOLARYNGOLOGY	23	21	2	3	1	2
PEDIATRICS	545	349	196	55	44	11
PHARMACEUTICAL SCIENCES	241	187	54	57	46	11
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	161	112	49	64	34	30
PSYCHIATRY	264	163	101	166	96	70
PULMONARY DISEASE	149	113	36	6	6	0
RADIOLOGY	187	152	35	72	59	13
SPEECH PATHOLOGY/AUDIOLOGY	18	8	10	23	18	5
SURGERY	390	343	47	51	39	12
VETERINARY SCIENCES	51	32	19	27	16	11
CLINICAL MEDICINE, N.E.C.	1,160	857	303	108	79	29
HEALTH RELATED, N.E.C.	101	60	41	9	7	2
PSYCHOLOGY	437	258	179	154	101	53
SOCIAL SCIENCES	361	244	117	219	158	61
AGRICULTURAL ECONOMICS	28	22	6	29	26	3
ANTHROPOLOGY	61	33	28	39	25	14
ECONOMICS (EXCEPT AGRICULTURAL)	20	16	4	42	21	21
GEOGRAPHY	7	7	0	9	7	2
HISTORY AND PHILOSOPHY OF SCIENCE	19	13	6	0	0	0
LINGUISTICS	51	29	22	2	1	1
POLITICAL SCIENCE	43	37	6	27	26	1
SOCIOLOGY	102	64	38	26	17	9
SOCIOLOGY/ANTHROPOLOGY	1	1	0	1	0	1
SOCIAL SCIENCES, N.E.C.	29	22	7	44	35	9

SOURCE: Selected Data on Graduate Science/Engineering Students and Postdoctorates, Fall, 1984, National Science Foundation, October 1985, unpublished

TABLE 5-17

SCIENCE/ENGINEERING POSTDOCTORATES IN DOCTORATE-GRANTING INSTITUTIONS, BY FIELD AND CITIZENSHIP, 1980-84

FIELD	U.S. CITIZENS				FOREIGN CITIZENS			
	1981	1982	1983	1984	1981	1982	1983	1984
TOTAL, ALL FIELDS	12,349	12,131	13,224	13,640	7,297	7,235	7,538	8,026
ENGINEERING	331	321	410	449	709	657	692	764
AEROSPACE	8	6	8	10	6	19	24	32
AGRICULTURAL	4	3	3	4	5	3	1	4
BIOMEDICAL	20	25	20	21	14	6	8	13
CHEMICAL	43	41	55	65	128	133	143	180
CIVIL	34	38	52	53	73	70	79	93
ELECTRICAL	104	82	67	61	87	94	107	110
ENGINEERING SCIENCE	37	35	39	39	50	41	32	42
INDUSTRIAL	6	4	6	12	7	5	8	10
MECHANICAL	24	30	69	82	106	100	113	114
METALLURGICAL/MATERIALS	25	28	53	52	168	138	151	116
MINING	5	2	18	18	11	8	1	0
NUCLEAR	4	10	6	7	22	8	9	12
PETROLEUM	0	2	1	1	2	2	0	3
ENGINEERING, N.E.C.	17	15	13	24	30	30	16	35
SCIENCES, TOTAL	12,018	11,810	12,814	13,191	6,588	6,578	6,846	7,262
PHYSICAL SCIENCES	2,104	1,914	2,059	1,974	2,358	2,367	2,385	2,412
ASTRONOMY	95	115	85	86	37	33	26	32
CHEMISTRY	1,216	1,144	1,306	1,250	1,654	1,661	1,667	1,656
PHYSICS	778	653	661	612	667	673	689	708
PHYSICAL SCIENCES, N.E.C.	15	2	7	26	0	0	3	16
ENVIRONMENTAL SCIENCES	213	214	256	324	126	121	159	164
ATMOSPHERIC SCIENCES	24	15	20	51	22	17	21	23
GEOSCIENCES	132	132	137	142	81	84	100	108
OCEANOGRAPHY	48	60	89	121	19	18	31	30
ENVIRONMENTAL SCIENCES, N.E.C.	9	7	10	10	4	2	7	3
MATHEMATICAL SCIENCES	52	68	80	103	61	126	90	100
COMPUTER SCIENCES	18	34	37	42	16	12	45	21
LIFE SCIENCES	9,005	8,939	9,767	10,123	3,850	3,786	3,990	4,417
AGRICULTURAL SCIENCES	171	163	214	256	113	116	81	102
BIOLOGICAL SCIENCES	5,328	5,359	5,809	6,002	2,378	2,397	2,574	2,821
ANATOMY	191	210	210	226	57	51	74	65
BIOCHEMISTRY	1,016	1,058	1,117	1,103	708	626	648	716
BIOLOGY	633	668	744	839	237	274	274	295
BIOMETRY/EPIDEMIOLOGY	46	39	34	58	18	14	20	9
BIOPHYSICS	86	78	122	74	69	51	61	47
BOTANY	165	202	269	260	75	96	100	87
CELL BIOLOGY	372	357	484	455	160	159	169	213
ECOLOGY	36	26	35	32	8	2	4	4
ENTOMOLOGY/PARASITOLOGY	104	89	82	92	29	30	30	21
GENETICS	218	238	244	266	80	76	100	116
MICROBIOLOGY	696	705	728	743	271	309	289	328
NUTRITION	114	101	101	91	57	37	50	59
PATHOLOGY	347	379	415	440	121	161	169	171
PHARMACOLOGY	507	481	493	501	248	296	308	315
PHYSIOLOGY	574	504	537	560	184	169	217	266
ZOOLOGY	169	175	151	145	38	28	32	30
BIOSCIENCES, N.E.C.	54	49	43	117	18	18	29	79
HEALTH SCIENCES	3,506	3,417	3,744	3,865	1,359	1,273	1,335	1,494
DENTISTRY	97	195	132	127	42	51	65	59
NEUROLOGY	213	190	215	248	74	64	86	104
NURSING	8	0	6	14	0	0	0	0
PHARMACEUTICAL SCIENCES	93	87	110	108	150	151	131	161
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	103	121	122	131	32	22	24	39
SPEECH PATHOLOGY/AUDIOLOGY	16	8	16	17	3	2	2	1
VETERINARY SCIENCES	22	41	45	68	9	8	5	10
CLINICAL MEDICINE, N.E.C.	2,875	2,700	3,006	3,059	1,015	958	998	1,095
HEALTH RELATED, N.E.C.	79	75	92	93	34	17	24	25
PSYCHOLOGY	417	455	374	376	54	65	61	46
SOCIAL SCIENCES	209	186	241	249	123	101	116	102
AGRICULTURAL ECONOMICS	5	4	20	14	1	6	8	4
ANTHROPOLOGY	26	31	51	48	4	3	9	9
ECONOMICS (EXCEPT AGRICULTURAL)	19	4	9	12	11	9	11	14
GEOGRAPHY	7	1	0	7	16	4	7	7
HISTORY AND PHILOSOPHY OF SCIENCE	13	8	11	1	8	6	8	5
LINGUISTICS	20	21	22	17	27	26	29	13
POLITICAL SCIENCE	22	26	27	14	24	18	16	17
SOCIOLOGY	79	72	84	97	11	17	15	17
SOCIOLOGY/ANTHROPOLOGY	0	1	0	0	0	1	1	0
SOCIAL SCIENCES, N.E.C.	18	18	17	39	21	11	12	16

SOURCE: National Center for Education Statistics, Preliminary Releases, and unpublished data

TABLE 5-18

WOMEN AS A PERCENT OF TOTAL FULL-TIME INSTRUCTIONAL FACULTY ON 9-MONTH CONTRACTS IN INSTITUTIONS OF HIGHER EDUCATION BY ACADEMIC RANK AND LEVEL OF INSTITUTIONAL UNIT, 1972-73 - 1982-83

ACADEMIC RANK AND YEAR	All Institutions	PUBLIC				PRIVATE			
		Total	Univ.	4-Yr. Inst.	2-Yr. Inst.	Total	Univ.	4-Yr. Inst.	2-Yr. Inst.
ALL RANKS									
1972-73	22.1	22.7	17.1	25.2	32.5	21.2	14.5	25.6	45.4
1974-75	24.1	24.8	19.3	24.4	32.7	23.5	16.3	25.6	44.1
1976-77	25.2	25.7	18.9	24.6	34.4	25.7	17.0	26.0	42.4
1979-80	25.9	26.4	20.0	26.4	34.7	24.8	18.2	27.4	48.6
1980-81	26.7	26.9	19.5	25.8	35.9	26.1	19.0	28.4	47.1
1981-82	27.1	27.3	19.9	26.2	36.4	26.2	19.2	28.6	46.9
1982-83*	26.9	27.1	19.8	26.4	36.6	26.6	20.2	28.0	45.2
PROFESSORS									
1972-73	9.8	10.0	6.7	12.7	21.2	9.5	5.4	12.5	31.5
1974-75	10.3	10.5	6.6	12.7	24.7	10.1	5.6	13.0	26.6
1976-77	9.6	9.7	6.2	11.8	20.8	9.2	5.6	12.0	26.4
1979-80	9.8	9.7	6.4	11.8	23.5	10.1	6.0	12.7	29.6
1980-81	10.6	10.6	6.2	12.3	22.9	10.6	6.5	13.4	28.9
1981-82	10.8	10.8	6.4	12.5	23.0	10.7	6.6	13.3	29.7
1982-83*	10.7	10.7	6.3	12.7	23.6	10.6	7.0	12.6	32.9
ASSOCIATE PROFESSORS									
1972-73	16.3	15.8	12.3	17.4	24.3	17.2	12.9	19.1	34.3
1974-75	16.9	16.1	13.3	17.0	24.7	18.6	13.5	20.8	26.6
1976-77	17.6	17.3	13.8	17.7	26.6	18.3	14.4	20.0	28.5
1979-80	19.4	19.1	16.2	18.9	29.4	20.3	16.6	21.6	42.7
1980-81	20.6	20.4	16.7	20.3	29.8	21.1	17.6	22.4	42.3
1981-82	21.5	21.3	17.6	21.0	31.7	21.9	18.8	23.0	40.7
1982-83*	22.0	21.9	17.9	22.0	33.0	22.3	19.4	23.3	35.8
ASSISTANT PROFESSORS									
1972-73	23.8	23.7	20.0	24.7	31.3	24.1	19.0	25.7	41.3
1974-75	27.1	27.0	24.4	27.6	33.8	27.3	22.4	28.7	45.2
1976-77	30.3	30.4	27.6	30.7	35.8	30.1	26.2	31.4	46.0
1979-80	33.9	33.8	31.1	34.5	38.6	34.7	30.0	35.4	52.9
1980-81	35.3	35.2	31.3	35.9	40.3	35.4	30.7	37.2	51.2
1981-82	35.9	35.8	31.8	36.8	40.9	36.1	30.9	40.0	51.5
1982-83*	36.1	35.9	30.7	37.7	41.6	36.5	32.2	37.9	49.8
INSTRUCTORS									
1972-73	39.9	39.2	44.4	44.0	35.1	42.5	41.0	41.5	53.8
1974-75	40.6	39.4	49.6	47.7	34.2	46.5	44.8	46.2	51.0
1976-77	50.6	61.1	51.8	51.5	48.1	49.5	48.6	49.0	59.4
1979-80	51.8	52.1	55.7	52.7	47.7	51.0	48.6	51.0	57.4
1980-81	52.8	58.3	56.0	53.7	50.7	51.5	49.6	51.6	56.3
1981-82	53.3	54.5	56.6	54.7	52.1	51.2	47.2	51.5	59.1
1982-83*	51.7	52.2	54.6	52.1	50.8	50.6	50.6	50.1	56.9
LECTURERS									
1972-73	34.9	35.1	30.3	40.2	51.2	34.2	29.1	38.1	52.9
1974-75	39.8	39.5	36.3	43.8	50.0	40.5	35.9	46.2	91.7
1976-77	40.8	41.1	40.9	39.7	54.6	39.6	36.3	43.6	87.5
1979-80	44.7	45.3	44.4	46.4	46.1	45.2	42.1	49.9	-
1980-81	46.5	46.2	45.8	49.2	54.8	47.3	46.1	46.9	90.0
1981-82	47.1	47.4	47.3	46.2	55.9	45.7	47.3	45.3	70.0
1982-83*	47.5	47.4	46.1	47.2	57.7	47.7	48.5	46.4	55.6
NO ACADEMIC RANK									
1972-73	32.8	32.3	23.4	38.8	32.4	34.7	10.0	30.1	40.6
1974-75	34.3	34.0	39.1	39.9	33.7	35.5	10.0	30.8	44.5
1976-77	34.8	34.5	53.1	46.5	34.2	37.6	42.7	35.1	40.2
1979-80	34.3	33.8	38.6	33.3	33.8	42.4	40.8	36.9	48.8
1980-81	36.1	35.7	40.3	36.0	35.7	40.4	40.1	35.5	46.7
1981-82	36.4	36.1	43.2	39.8	36.0	39.8	42.2	33.4	46.2
1982-83*	36.5	36.2	37.3	36.3	36.2	38.7	45.5	31.4	44.6

* Includes both 9- and 12-month contracts.

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 5-19

Teachers, Counselors and Administrators by Educational Level, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
EDUCATION	4359269	1490879	1323354	51728	5683	28805	1731	41580	2868390	2438220	302013	11847	32937	1902	81471
	100.00%	34.20%	30.36%	2.10%	0.13%	0.61%	0.04%	0.95%	65.80%	55.93%	6.93%	0.27%	0.76%	0.04%	1.87%
Teachers, Elementary & Secondary	3363514	950590	842201	67854	3765	8798	810	27162	2412924	2036833	271570	10096	24329	1439	68657
	100.00%	28.26%	25.04%	2.02%	0.11%	0.26%	0.02%	0.81%	71.74%	60.56%	8.07%	0.30%	0.72%	0.04%	2.04%
Prekindergarten & Kindergarten	183338	6564	4687	1273	78	157	5	363	176774	142126	24171	1099	1673	173	7532
	100.00%	3.58%	2.56%	0.69%	0.04%	0.09%	0.00%	0.20%	96.42%	77.52%	13.18%	0.60%	0.91%	0.09%	4.11%
Elementary School	2319378	569823	497935	45830	2287	5627	563	17661	1749547	1471072	203147	7190	18451	919	48768
	100.00%	24.57%	21.47%	1.98%	0.10%	0.24%	0.02%	0.76%	75.43%	63.43%	8.76%	0.31%	0.80%	0.04%	2.10%
Secondary School	860806	374203	339579	20751	1479	3014	242	9138	486603	423635	44252	1807	4205	347	12357
	100.00%	43.47%	39.45%	2.41%	0.17%	0.35%	0.03%	1.06%	56.53%	49.21%	5.14%	0.21%	0.49%	0.04%	1.44%
Teachers, Postsecondary	995755	540289	481153	23872	1918	18007	921	14418	455488	401387	30443	1751	8608	463	12814
	100.00%	54.26%	48.32%	2.40%	0.19%	1.81%	0.09%	1.45%	45.74%	40.31%	3.06%	0.18%	0.86%	0.05%	1.29%
Counselors, Educational & Vocational	198256	90587	73447	10607	1059	1219	93	4162	107669	83405	17183	1379	1395	99	4208
	100.00%	45.69%	37.05%	5.35%	0.53%	0.81%	0.05%	2.10%	54.31%	42.07%	8.67%	0.70%	0.70%	0.05%	2.12%
Education & Related Fields, Administrators	387538	239766	210678	20154	945	1718	158	6113	147772	121224	19193	1050	1532	101	4672
	100.00%	61.87%	54.36%	5.20%	0.24%	0.44%	0.04%	1.58%	38.13%	31.28%	4.95%	0.27%	0.40%	0.03%	1.21%
Teacher's Aides	215703	16163	9983	3132	323	765	37	1923	199548	138177	33906	2435	2053	147	22828
	100.00%	7.49%	4.63%	1.45%	0.15%	0.35%	0.02%	0.89%	92.51%	64.06%	15.72%	1.13%	0.95%	0.07%	10.58%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 5-20

Post-Secondary Teachers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Teachers, Postsecondary	995755	540289	481153	23872	1918	18007	921	14418	455466	401387	30443	1751	8608	463	12814
	100.00%	54.26%	48.32%	2.40%	0.19%	1.81%	0.09%	1.45%	45.74%	40.31%	3.06%	0.18%	0.86%	0.05%	1.29%
Agriculture/Forestry	3813	3248	3009	122	18	41	18	38	567	521	37	0	2	0	7
	100.00%	85.13%	78.91%	3.20%	0.47%	1.08%	0.47%	1.00%	14.87%	13.66%	0.97%	0.00%	0.05%	0.00%	0.18%
Art/Drama/Music	28385	14718	13448	773	64	135	12	286	13667	12458	673	54	272	16	194
	100.00%	51.85%	47.38%	2.72%	0.23%	0.48%	0.04%	1.01%	48.15%	43.89%	2.37%	0.19%	0.96%	0.06%	0.68%
Biological Science	9651	6537	6095	122	8	230	7	75	3114	2782	171	13	113	5	30
	100.00%	67.73%	63.15%	1.26%	0.08%	2.38%	0.07%	0.78%	32.27%	28.83%	1.77%	0.13%	1.17%	0.05%	0.31%
Business/Commerce/ Marketing	7618	4022	3851	189	20	117	7	58	3594	3180	259	10	45	0	100
	100.00%	52.81%	47.94%	2.22%	0.26%	1.54%	0.09%	0.76%	47.19%	41.75%	3.40%	0.13%	0.59%	0.00%	1.31%
Chemistry	8382	6671	6040	148	15	351	0	117	1711	1531	58	0	83	0	39
	100.00%	79.59%	72.06%	1.77%	0.18%	4.19%	0.00%	1.40%	20.41%	18.27%	0.69%	0.00%	0.99%	0.00%	0.47%
Computer Science	2558	1842	1519	68	7	170	6	72	716	615	54	0	20	0	27
	100.00%	72.01%	59.38%	2.66%	0.27%	6.65%	0.23%	2.81%	27.99%	24.04%	2.11%	0.00%	0.78%	0.00%	1.06%
Earth/Environmental/ Marine	2274	1904	1827	10	5	38	12	12	370	342	0	0	9	0	19
	100.00%	83.73%	80.34%	0.44%	0.22%	1.67%	0.53%	0.53%	16.27%	15.04%	0.00%	0.00%	0.40%	0.00%	0.84%
Economics	5032	4024	3681	103	0	172	13	55	1008	872	43	0	54	0	39
	100.00%	79.97%	73.15%	2.05%	0.00%	3.42%	0.26%	1.09%	20.03%	17.33%	0.85%	0.00%	1.07%	0.00%	0.78%
Education	2308	1373	1207	121	6	9	6	24	935	807	90	0	32	0	6
	100.00%	59.49%	52.30%	5.24%	0.26%	0.39%	0.26%	1.04%	40.51%	34.97%	3.90%	0.00%	1.39%	0.00%	0.26%
Engineering	10972	9719	8670	317	38	487	6	201	1253	1115	70	0	36	7	25
	100.00%	88.58%	79.02%	2.89%	0.35%	4.44%	0.05%	1.83%	11.42%	10.16%	0.64%	0.00%	0.33%	0.06%	0.23%
English	23403	10538	9740	302	8	192	28	268	12865	11664	700	45	148	22	286
	100.00%	45.03%	41.62%	1.29%	0.03%	0.82%	0.12%	1.15%	54.97%	49.84%	2.99%	0.19%	0.63%	0.09%	1.22%
Foreign Language	9954	4039	3331	56	6	184	11	451	5915	4689	129	3	254	23	817
	100.00%	40.58%	33.46%	0.56%	0.06%	1.85%	0.11%	4.53%	59.42%	47.11%	1.30%	0.03%	2.55%	0.23%	8.21%
Health Specialties	19551	2596	2360	139	12	51	0	34	16955	15159	1093	61	303	6	333
	100.00%	13.28%	12.07%	0.71%	0.06%	0.26%	0.00%	0.17%	86.72%	77.54%	5.59%	0.31%	1.55%	0.03%	1.70%
History	5600	4267	4002	126	0	81	0	78	1333	1224	84	0	20	0	5
	100.00%	76.20%	71.46%	2.25%	0.00%	1.09%	0.00%	1.39%	23.80%	21.86%	1.50%	0.00%	0.36%	0.00%	0.09%
Home Economics	1987	163	150	5	0	8	0	0	1824	1655	112	1	13	0	43
	100.00%	8.20%	7.55%	0.25%	0.00%	0.40%	0.00%	0.00%	91.80%	83.29%	5.64%	0.05%	0.65%	0.00%	2.16%

TABLE 5-20 (continued)

Post-Secondary Teachers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Teachers, Postsecondary Continued															
Law	4112 100.00%	3301 80.28%	3125 76.00%	104 2.53%	0 0.00%	19 0.46%	4 0.10%	49 1.19%	811 19.72%	711 17.29%	78 1.90%	0 0.00%	6 0.15%	0 0.00%	16 0.39%
Mathematical Sciences	16697 100.00%	11390 68.22%	10004 59.91%	496 2.97%	58 0.35%	507 3.04%	14 0.08%	311 1.86%	5307 31.78%	4555 27.28%	438 2.62%	7 0.04%	221 1.32%	5 0.03%	81 0.49%
Medical Science	9014 100.00%	6891 76.45%	6141 68.13%	175 1.94%	0 0.00%	319 3.54%	31 0.34%	225 2.50%	2123 23.55%	1939 21.51%	81 0.90%	0 0.00%	45 0.50%	7 0.08%	51 0.57%
Natural Sciences, Misc.	831 100.00%	637 76.65%	588 70.76%	6 0.72%	0 0.00%	19 2.29%	0 0.00%	24 2.89%	194 23.35%	184 22.14%	10 1.20%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Physical Education	9008 100.00%	5382 59.75%	4722 52.42%	432 4.80%	26 0.29%	69 0.77%	0 0.00%	133 1.48%	3626 40.25%	3319 36.85%	194 2.15%	20 0.22%	35 0.39%	8 0.09%	50 0.56%
Physics	5414 100.00%	4882 90.17%	4363 80.59%	65 1.20%	6 0.11%	303 5.60%	12 0.22%	133 2.46%	532 9.83%	452 8.35%	16 0.30%	0 0.00%	38 0.70%	4 0.07%	22 0.41%
Political Science	2086 100.00%	1677 81.17%	1451 70.23%	110 5.32%	6 0.29%	78 3.78%	13 0.63%	19 0.92%	389 18.83%	375 18.15%	0 0.00%	0 0.00%	10 0.48%	0 0.00%	4 0.19%
Psychology	5820 100.00%	3494 60.03%	3244 55.74%	123 2.11%	29 0.50%	53 0.91%	0 0.00%	45 0.77%	2326 39.97%	2047 35.17%	153 2.63%	0 0.00%	47 0.81%	0 0.00%	79 1.36%
Social Sciences, Misc.	2009 100.00%	1301 64.76%	1192 59.33%	23 1.14%	16 0.80%	27 1.34%	11 0.55%	32 1.59%	708 35.24%	642 31.96%	12 0.60%	6 0.30%	6 0.30%	0 0.00%	42 2.09%
Social Work	810 100.00%	329 40.62%	306 37.78%	12 1.48%	0 0.00%	0 0.00%	0 0.00%	11 1.36%	481 59.38%	318 39.26%	105 12.96%	0 0.00%	23 2.84%	0 0.00%	35 4.32%
Sociology	3207 100.00%	2263 70.56%	2016 62.86%	129 4.02%	10 0.31%	62 1.93%	13 0.41%	33 1.03%	944 29.44%	816 25.44%	87 2.71%	0 0.00%	18 0.56%	0 0.00%	23 0.72%
Special Education	32818 100.00%	10138 30.89%	8982 27.37%	693 2.11%	68 0.21%	118 0.36%	8 0.02%	269 0.82%	22680 69.11%	19646 59.86%	2364 7.20%	107 0.33%	129 0.39%	12 0.04%	422 1.29%
Theology	3576 100.00%	2809 78.55%	2664 74.50%	64 1.79%	0 0.00%	46 1.29%	0 0.00%	35 0.98%	767 21.45%	704 19.69%	25 0.70%	8 0.22%	12 0.34%	0 0.00%	18 0.50%
Trade/Industrial	3595 100.00%	2490 89.28%	2221 81.78%	183 5.09%	8 0.22%	36 1.00%	5 0.14%	37 1.03%	1105 30.74%	993 27.62%	95 2.64%	0 0.00%	0 0.00%	0 0.00%	17 0.47%
Miscellaneous Post-secondary Teachers	755292 100.00%	407646 53.97%	361404 47.85%	18676 2.47%	1484 0.20%	14105 1.87%	684 0.09%	11293 1.50%	347646 46.03%	306072 40.52%	23212 3.07%	1416 0.19%	6614 0.88%	348 0.05%	9984 1.32%

SOURCE: Digest of Education Statistics, Series 1973 through 1983-84 editions, National Center of Education Statistics

TABLE 5-21

HISTORICAL SUMMARY OF U.S. FACULTY* IN HIGHER EDUCATION BY SEX, 1869-70 TO 1980-81

YEAR	Total Institutions	Total Faculty	Men	Women	%W
1869-1870	563	5,553**	4,887**	666**	12.0
1879-1880	811	11,522**	7,328**	4,194**	36.4
1889-1890	998	15,809**	12,704**	3,105**	19.6
1899-1900	977	23,868	19,151	4,717	19.8
1909-1910	951	36,480	29,132	7,348	20.1
1919-1920	1,041	48,615	35,807	12,808	26.4
1929-1930	1,409	82,386	60,017	22,369	27.2
1939-1940	1,708	146,929	106,328	40,601	27.6
1949-1950	1,851	246,722	186,189	60,533	24.5
1959-1960	2,008	380,554	296,773	83,781	22.0
1969-1970	2,525	825,000	619,000	206,000	25.0
1971-1972	2,720	881,665	639,251	242,414	27.5
1976-1977	2,785	1,073,119	729,169	343,950	32.0
1977-1978**	2,826	1,090,000	740,000	350,000	32.1
1978-1979	3,134	1,097,000	732,000	365,000	33.3
1979-1980	3,152	1,127,000**	751,000**	376,000**	33.3
1980-1981	3,231	1,179,000**	784,000**	395,000**	33.5

* All individuals, not reduced to full-time equivalents ** Estimated

SOURCE: 1980 Fact Book for Academic Administrators, American Council on Education and Digest of Education - Statistics, 1981, National Center for Education Statistics and Profile of Women's College Presidents, Women's College Coalition; and American Council on Education, Office of Women in Higher Education, December 1984 and September 1985

TABLE 5-22

WOMEN COLLEGE PRESIDENTS BY TYPE AND CONTROL OF INSTITUTION, 1975-1984

YEAR AND TYPE OF INSTITUTION		All Institutions Headed by Women		Public Institutions Headed by Women		Private Institutions Headed by Women		Women's Colleges* Headed by Women		Members of Religious Orders
		No.	%†	No.	%†	No.	%†	No.	%†	No.
1975	Total	148	4.8	16	1.1	132	8.2	na	na	105
	Four-Year	103	5.4	5	0.9	98	7.2	na	na	79
	Two-Year	45	3.9	11	1.2	34	14.2	na	na	26
1976	Total	154	5.0	16	1.1	138	8.6	71	56.8	na
	Four-Year	110	5.7	3	0.5	107	7.8	57	58.8	na
	Two-Year	44	3.8	13	1.4	31	13.0	14	50.0	na
1977	Total	156	5.0	19	1.3	137	8.3	87	71.3	na
	Four-Year	112	5.7	5	0.9	107	7.7	72	75.0	na
	Two-Year	44	3.7	14	1.5	30	12.0	15	57.7	na
1978	Total	177	5.6	31	2.1	146	8.7	75	64.1	na
	Four-Year	123	6.3	9	1.6	114	8.1	62	66.7	na
	Two-Year	54	4.5	22	2.4	32	11.3	13	54.2	na
1980	Total	219	6.9	62	4.2	157	9.4	78	67.8	na
	Four-Year	145	7.4	21	3.8	124	8.8	60	67.4	na
	Two-Year	64	5.4	41	4.4	33	12.3	18	18.3	na
1981	Total	231	7.2	72	4.8	159	9.2	80	70.2	98
	Four-Year	162	8.3	25	4.5	135	9.5	61	68.5	86
	Two-Year	69	5.4	47	4.9	24	7.1	19	19.4	12
1982	Total	244	7.5	78	5.2	166	9.5	84	73.7	99
	Four-Year	152	8.1	25	4.5	127	8.9	62	69.7	73
	Two-Year	92	7.2	53	5.6	39	11.6	22	22.4	26
1983	Total	254	7.8	85	5.7	169	9.6	85	74.6	97
	Four-Year	152	7.7	28	5.0	124	8.7	na	na	
	Two-Year	102	8.0	57	6.1	45	13.4	na	na	
1984	Total	286	8.8	104	6.9	182	10.4	83	74.8	95
	Four-Year	166	8.4	32	5.7	134	9.4	na		na
	Two-Year	120	9.4	72	7.7	48	14.4	na		na

na Not available in source.

* Institutions with enrollment of at least 90 percent women.

† Institutions headed by women as a percentage of all institutions of the type indicated. Annual directories published by NCES are the source of data concerning the "universe" of institutions by type and control.

SOURCE: Fact Sheet on Women In Educational Administration compiled by Suzanne Howard, September 1980 and Digest of Education Statistics, 1982 and Estimates of School Statistics Series, National Education Association

TABLE 5-23

WOMEN AS A PERCENT OF TOTAL STAFF IN ELEMENTARY AND SECONDARY EDUCATION

	YEAR OF DATA													
	1928	1948	1965	1968	1974	1976	1977	1978	1979	1980	1981	1983	1984	1985
Teachers														
Elementary		93.0		85.0	83.0	87.0		83.0		83.0	83.1	83.4	83.5	83.5
Secondary		60.0		47.0		48.0		46.0		48.0	48.9	49.4	49.7	50.1
Principals														
Elementary	55.0	41.0			13.0			18.0						
Secondary			10.0				7.0							

SOURCE: The Condition of Education, 1985 Edition, NCES

TABLE 5-24

PERCENTAGE DISTRIBUTION OF FULL-TIME TEACHERS IN PUBLIC SCHOOLS, 1979 AND 1983

LEVEL	WHITE	BLACK	HISPANIC	ASIAN	AM. INDIAN	OTHER
1979						
Elementary	85.8	10.9	2.3	0.6	0.2	
Secondary	88.9	8.6	1.8	0.4	0.2	
1983						
Elem./Sec.	88.4	8.2				3.3

SOURCE: National Science Teachers Association, Unpublished Data, 1985-86 Survey of Science and Math Teachers

TABLE 5-25

SCIENCE, MATH AND SOCIAL STUDIES TEACHERS BY GRADE RANGE AND SEX, 1985-86

(Percent)

	SCIENCE		MATH		SOCIAL STUDIES		TOTAL	
	7-8	9-12	7-8	9-12	7-8	9-12	7-8	9-12
Number In Sample	1,297	2,252	1,349	2,481	1,138	2,106	3,724	6,839
% Men	59.2	65.4	48.2	57.7	56.8	68.8	54.4	63.7
% Women	35.2	28.3	46.4	38.4	38.0	25.7	40.1	31.2
% Unknown	5.6	6.3	5.6	4.8	5.3	5.5	5.5	5.5

CHAPTER 6

PHYSICAL, MATHEMATICAL, AND COMPUTER SCIENCES

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FIELD: Physical Sciences and Mathematics

SOURCE: Tables throughout Professional Women and Minorities

TABLE 6-1

PROPORTIONS OF WOMEN IN THE PHYSICAL AND MATHEMATICAL SCIENCES, SUMMARY TABLE

	CHEMISTRY		PHYSICS		ASTRONOMY		GEOSCIENCES		COMPUTER SCI.		MATHEMATICS		STATISTICS	
	1960-77	1983	1960-77	1983	1960-77	1983	1960-77	1983	1965-77	1983	1960-77	1983	1960-77	1983
Degrees Granted														
Bachelor's	19.6	33.6	6.4	12.7	15.2	26.7	12.7	25.5	16.4	36.4	36.6	43.8	21.7	48.7
Master's	20.0	28.4	5.8	11.7	12.1	19.0	9.5	23.6	11.4	28.3	26.2	34.5	18.0	36.2
Ph.D.'s (1984)	8.1	18.1	2.8	6.8	7.6	12.2	3.7	18.4	5.8	12.2	7.8	16.5	8.0	17.0
	1972	1985	1972	1985			1970	1985	1970	1985	1970	1985	1970	1985
General Labor Force	13.5	21.0	4.1	7.8			7.1	14.8	11.1	30.2	11.4	21.0	11.4	53.3
	1970	1983	1971	1983	1973		1973	1983	1970	1983	1970	1983	1970	1983
Doctoral Labor Force	6.5	8.4	1.7	3.2	9.6		2.8	5.8	6.9	10.5	6.5	8.6	5.4	10.9
Academic Labor Force	1970-71	1985	1971-72	1985	1972-73	1985	1964-65	1985	1970	1985	1975-76	1983-84	1970	1978
Total	1.5	14.5	3.2	5.5	4.6	8.5	1.2	11.0	12.2	20.0	9.2	17.0	9.4	18.2
Professor*		4.8	2.4	1.7	2.4		1.0	1.7		3.9	4.3	4.3		2.4
Assoc. Professor*		12.4	2.7	3.3	2.7		0.7	3.2		6.0	6.4	9.0		9.0
Asst. Professor*		20.0	3.5	8.5	3.3		1.7	9.8		11.3	12.4	13.7		32.5
	1972	1984	1972	1984	1972	1984	1972	1984	1972	1984	1970	1984	1970	1984
Federal Labor Force	14.9	21.7	2.5	5.0	3.6	5.9	3.7	13.3	19.0	28.4	9.0	25.4	13.3	31.5

*Doctoral only, 1983

TABLE 6-2

PROPORTION OF MINORITIES IN THE PHYSICAL AND MATHEMATICAL SCIENCES, SUMMARY TABLE

	BLACK		HISPANIC		AMERICAN INDIAN		ASIAN	
	1975-76	1982	1975-76	1982	1975-76	1982	1975-76	1982
Degrees Granted								
Bachelor's	2.9	0.6	1.3	1.2	0.3	0.1	1.5	0.3
Master's	2.4	0.2	1.0	0.6	0.2	0.0	2.6	0.9
Ph.D.'s (1983)	0.9	0.7	0.8	1.0	0.2	0.2	2.5	4.9
	1970	1985	1970	1985	1970	1982	1970	1982
General Labor Force	3.2	4.9	1.6	2.6	0.1	0.3	1.9	4.6
	1973	1983	1973	1983	1973	1983	1973	1983
Doctoral Labor Force	0.8	1.8	0.6	1.4	0.0	0.1	4.7	8.4
	1978	1984	1978	1984	1978	1984	1978	1984
Federal Labor Force	4.1	3.7	1.2	1.4	0.1	0.3	2.2	5.0
	1981	1983	1979	1983	1981	1983	1981	1983
Academic Labor Force (Ph.D. Only)	1.2	1.3	0.7	1.0	0.6	0.1	7.4	7.4

FIELD: Physical Sciences

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 6-3

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN PHYSICAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1984

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	%
General Physical Science	5,173	473	9.1	321	6.2	53	1.0	178	3.4	52	1.2	85	1.6	6	0.1	4,852	93.8
Health Physics	578	68	11.8	59	10.2	10	1.7	23	4.0	7	1.2	27	4.7	2	0.3	519	89.8
Physics	4,561	226	5.0	289	6.3	34	0.7	75	1.6	52	1.1	152	3.3	10	0.2	4,272	93.7
Physical Science Technician	4,622	1,318	28.5	868	18.8	280	6.1	479	10.4	150	3.2	195	4.2	44	1.0	3,754	81.2
Geophysics	606	54	8.9	39	6.4	2	0.3	10	1.7	10	1.7	17	2.8	2	0.3	567	93.6
Hydrology	2,044	151	7.4	101	4.9	16	0.8	16	0.8	41	2.0	38	1.9	6	0.3	1,943	95.1
Hydrologic Technician	1,724	332	19.3	196	11.4	40	2.3	61	3.5	84	4.9	33	1.9	18	1.0	1,528	88.6
Chemistry	7,848	1,703	21.7	1,303	16.6	371	4.7	528	6.7	137	1.7	618	7.9	20	0.3	6,545	83.4
Metallurgy	487	22	4.5	53	10.9	2	0.4	7	1.4	12	2.5	34	7.0	0	0.0	434	89.1
Astronomy & Space Science	578	34	5.9	30	5.2	1	0.2	9	1.6	6	1.0	13	2.2	2	0.3	548	94.8
Meteorology	2,115	105	5.0	186	8.8	31	1.5	68	3.2	43	2.0	71	3.4	4	0.2	1,929	91.2
Meterological Technician	2,291	148	6.5	250	10.6	29	1.3	91	4.0	81	3.5	59	2.6	19	0.8	2,041	89.1
Geology	2,811	414	14.7	100	3.6	22	0.8	18	0.6	33	1.2	35	1.2	14	0.5	2,711	96.4
Oceanography	793	92	11.6	72	9.1	17	2.1	41	5.2	9	1.1	17	2.1	5	0.6	721	90.9
Navigational Information	494	69	14.0	44	8.9	13	2.6	30	6.1	8	1.6	3	0.6	3	0.6	450	91.1
Cartography	4,747	859	18.1	613	12.9	152	3.2	416	8.8	145	3.1	42	0.9	10	0.2	4,134	87.1
Cartographic Technician	2,017	646	32.0	335	16.6	99	4.9	150	7.4	112	5.6	32	1.6	41	2.0	1,682	83.4
Geodesy	395	47	11.9	35	8.9	11	2.8	23	5.8	7	1.8	5	1.3	0	0.0	360	91.1
Geodetic Technician	87	25	28.7	14	16.1	9	10.3	12	13.8	2	2.3	0	0.0	0	0.0	73	83.9
Land Surveying	508	10	2.0	27	5.3	1	0.2	1	0.2	15	3.0	2	0.4	9	1.8	481	94.7
Forest Products Technology	95	4	4.2	3	3.2	0	0.0	0	0.0	0	0.0	3	3.2	0	0.0	92	96.8
Food Technology	192	44	22.9	18	9.4	4	2.1	5	2.6	2	1.0	11	5.7	0	0.0	174	90.6
Textile Technology	98	40	40.8	5	5.1	1	1.0	5	5.1	0	0.0	0	0.0	0	0.0	93	94.9
Photographic Technology	66	2	3.0	4	6.1	0	0.0	1	1.5	3	4.5	0	0.0	0	0.0	62	93.9
Document Analysis	35	5	14.3	3	8.6	2	5.7	3	8.6	0	0.0	0	0.0	0	0.0	32	91.4
Phys. Science Student Trainee	223	94	42.2	42	18.8	21	9.4	21	9.4	10	4.5	11	4.9	0	0.0	181	81.2

FIELD: Physical Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1984 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1985

TABLE 6-4

NUMBER OF Ph.D. RECIPIENTS IN THE PHYSICAL SCIENCES BY TYPE OF CITIZENSHIP, 1960-1984

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	1,861	1,619	229	51	178	13
1961	1,993	1,696	269	48	221	28
1962	2,097	1,812	262	32	230	23
1963	2,428	2,045	333	55	278	50
1964	2,527	2,130	343	74	269	54
1965	2,865	2,418	411	85	326	36
1966	3,059	2,526	446	88	358	87
1967	3,504	2,891	540	124	416	73
1968	3,671	3,073	527	130	397	71
1969	3,919	3,251	581	170	411	87
1970	4,404	3,631	709	275	434	64
1971	4,501	3,689	737	330	407	75
1972	4,233	3,348	819	373	446	66
1973	4,021	3,098	856	348	508	67
1974	3,709	2,743	809	302	507	157
1975	3,631	2,734	813	269	544	84
1976	3,442	2,619	765	247	518	58
1977	3,410	2,623	720	213	507	67
1978	3,234	2,494	670	206	464	70
1979	3,321	2,570	685	199	486	66
1980	3,151	2,393	682	176	506	76
1981	3,208	2,419	683	160	523	106
1982	3,348	2,511	733	146	587	104
1983	3,438	2,544	794	149	645	100
1984	3,459	2,546	913	142	671	100

FIELD: Chemistry

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 6-5

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Chemistry Subtotal	42,190	2,550	6.0	8,596	914	10.8	7,959	1,177	14.8	1,759	297	16.9	1,765	320	18.1
Analytical Chemistry	1,883	122	6.5	738	50	6.8	987	124	12.6	264	46	17.4	228	32	14.0
Inorganic Chemistry[1]	2,880	238	8.3	1,117	149	13.3	993	167	16.8	215	38	17.7	233	50	21.5
Organic Chemistry[1]	11,065	633	5.7	2,838	230	8.1	24,121	521	13.3	503	70	13.9	524	72	13.7
Nuclear Chemistry[2]	364	21	5.8	126	11	8.7	73	7	9.6	13	3	23.1	18	3	16.7
Physical Chemistry	7,291	490	6.7	1,948	248	12.7	1,516	251	16.6	311	61	19.6	329	63	19.2
Theoretical Chemistry[2]	491	48	10.0	239	33	13.8	207	28	13.5	48	7	14.6	37	5	13.5
Agriculture & Food Chemistry[3]	925	75	8.1	50	6	12.0	19	4	21.1						
Pharmaceutical Chemistry	914	43	4.7	283	35	12.4	253	42	16.6	78	16	20.5	56	15	26.8
Polymer Chemistry[4]				184	9	4.9	296	23	7.8	62	12	19.4	63	12	19.1
Chemistry, General[5]	3,798	300	7.9	761	93	12.2	832	137	16.5	177	23	13.0	184	41	22.3
Chemistry, Other	12,579	579	4.6	312	50	16.0	351	73	20.8	88	21	23.9	93	27	29.0

[1] Broken out into "basic" and "applied" in 1960. This distinction dropped in 1962.
[2] Added in 1960.
[3] Dropped after 1979.
[4] Add in 1973
[5] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General classifications of their respective fields.

FIELD: Chemistry

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-6

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	94,601	17,646	18.6	16,425	2,136	13.0
1960-61 thru 1969-70	98,165	18,651	19.0	17,174	3,251	18.9
1970-71	11,183	2,095	18.7	2,253	487	21.6
1971-72	10,721	2,120	19.8	2,259	505	22.4
1972-73	10,226	1,967	19.2	2,230	467	20.9
1973-74	10,525	2,112	20.1	2,138	474	22.2
1974-75	10,649	2,385	22.4	2,006	416	20.7
1975-76	11,107	2,497	22.5	1,796	383	21.3
1976-77	11,215	2,556	22.8	1,767	443	25.1
1977-78	11,474	2,881	25.1	1,892	445	23.5
1978-79	11,643	3,113	26.7	1,765	447	25.3
1979-80	11,446	3,277	28.6	1,733	447	25.8
1980-81	11,347	3,394	29.9	1,654	470	28.4
1981-82	11,062	3,491	31.6	1,751	492	28.1
1982-83	10,796	3,680	34.1	1,622	460	28.4
TOTAL	336,160	71,865	21.4	58,465	11,323	19.4

NOTE: Includes Geology, Geochemistry, Geophysics, Earth Sciences, Paleantology, Oceanography and Metallurgy.

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 6-7

DOCTORAL DEGREES BY SEX, 1920-1984

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	21,179	1,061	5.0
FY 1960 thru FY 1969	14,562	931	6.4
FY 1969 thru FY 1972	6,449	558	8.7
FY 1973	1,849	179	9.7
FY 1974	1,792	174	9.7
FY 1975	1,762	192	10.9
FY 1976	1,623	189	11.6
FY 1977	1,570	180	11.5
FY 1978	1,545	196	12.7
FY 1979	1,567	220	14.0
FY 1980	1,538	255	16.6
FY 1981	1,611	235	14.6
FY 1982	1,678	271	16.2
FY 1983	1,759	297	16.9
FY 1984	1,765	320	18.1
TOTAL	62,249	5,258	8.5

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

 FIELD: Biochemistry

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-8

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	1,965	284	14.4	1,748	394	22.1
1960-61 thru 1969-70	2,509	673	26.8	2,235	685	30.6
1970-71	568	138	24.3	251	99	39.4
1971-72	699	175	25.2	252	90	35.7
1972-73	872	195	22.4	270	74	27.4
1973-74	1,101	254	23.1	249	65	26.1
1974-75	1,355	359	26.5	270	77	28.5
1975-76	1,622	480	29.6	254	72	28.3
1976-77	1,693	495	29.2	314	104	34.2
1977-78	1,752	517	29.5	319	105	32.9
1978-79	1,799	591	32.9	301	131	43.5
1979-80	1,686	596	35.4	268	98	36.6
1980-81	1,837	656	35.7	258	90	34.9
1981-82	1,865	668	35.8	273	104	38.1
1982-83	1,876	716	38.2	270	105	38.9
TOTAL	23,199	6,797	29.3	7,532	2,293	30.4

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 6-9

DOCTORAL DEGREES BY SEX, 1920-1984

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	3,544	484	13.7
FY 1960 thru FY 1969	4,241	713	16.8
FY 1970 thru FY 1972	1,815	322	17.7
FY 1973	636	129	20.3
FY 1974	606	147	24.3
FY 1975	620	147	23.7
FY 1976	616	141	22.9
FY 1977	608	135	22.2
FY 1978	607	146	24.0
FY 1979	600	156	26.0
FY 1980	672	188	28.0
FY 1981	644	189	29.3
FY 1982	650	166	25.5
FY 1983	646	194	30.0
FY 1984	606	191	31.5
TOTAL	17,111	3,430	20.1

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Chemistry

SOURCE: American Chemical Society, Committee on Professional Training

TABLE 6-10

CHEMISTRY GRADUATES BY DEGREE LEVEL AND SEX, 1971-1984

YEAR	B.S. (ACS Certified)			B.S. (Not Cerified)			M.S.			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1971	3,708	592	16.0	4,248	744	17.5	1,941	443	22.8	2,097	117	8.4
1972	3,424	587	17.1	4,484	819	18.3	2,019	470	23.3	1,929	207	10.7
1973	3,835	687	17.9	4,225	755	17.9	2,005	439	21.9	1,880	182	9.7
1974	3,844	758	19.7	4,868	948	19.5	1,867	430	23.0	1,732	181	10.4
1975	3,897	794	20.4	5,187	1,110	21.4	1,814	401	22.1	1,781	208	11.7
1976	4,103	855	20.8	5,813	1,332	22.9	1,676	373	22.3	1,622	202	12.5
1977	4,219	949	22.3	5,988	1,355	22.6	1,688	403	23.9	1,563	189	12.1
1978	4,260	995	23.4	6,090	1,540	25.3	1,798	434	24.1	1,532	214	14.0
1979	4,424	1,107	25.0	6,027	1,691	28.1	1,716	448	26.1	1,532	243	15.9
1980	4,170	1,152	27.6	6,000	1,658	27.6	1,698	419	24.7	1,561	274	17.6
1981	4,337	1,223	28.2	6,116	1,806	29.5	1,609	451	28.0	1,613	255	15.8
1982	4,179	1,284	30.7	5,687	1,721	30.3	1,645	491	29.8	1,683	272	16.2
1983	4,233	1,391	32.9	5,810	1,921	33.1	1,569	444	28.3	1,759	300	17.1
1984	4,201	1,420	33.8	5,618	1,952	34.7	1,637	544	33.2	1,777	331	18.6

SOURCE: Professionals in Chemistry 1979-80, 1981-82, and 1983-84. American Chemical Society, March 1981, March [illegible] 1984 and July 1985.

TABLE 6-11

DEGREES GRANTED IN CHEMISTRY BY MINORITY STATUS AND DEGREE LEVEL, 1973-74 THRU 1982-83

Degree Level and Academic Year	Number of Degrees Granted	PERCENT GRANTED TO MINORITIES AND NON-U.S. CITIZENS				
		Black	American Indian	Asian/ Pacific Islander	Hispanic	Non-U.S. Citizen
Bachelor's						
1973-74	10,525	1.9	0.2	2.0	1.1	2.0
1974-75	10,649	1.4	0.1	2.0	0.9	1.8
1975-76	11,107	1.8	0.2	1.5	1.2	1.2
1976-77	11,322	1.8	0.3	2.2	1.4	1.9
1977-78	11,474	1.6	0.1	2.5	0.8	2.0
1978-79	11,643	1.6	0.2	2.4	1.3	2.3
1979-80	11,860	2.0	0.3	2.0	1.5	2.9
1980-81	11,347	2.7	0.4	2.8	1.7	2.3
1981-82	11,062	2.2	0.2	3.4	2.0	2.1
1982-83	11,261	2.7	0.1	2.6	2.1	1.8
Master's						
1973-74	2,138	2.6	0.0	1.3	0.0	13.4
1974-75	2,006	1.4	0.5	1.9	0.3	12.1
1975-76	1,796	2.7	0.0	2.1	1.1	9.9
1976-77	1,775	1.9	0.3	1.4	0.5	11.7
1977-78	1,892	3.5	0.3	1.0	0.6	12.6
1978-79	1,765	1.5	1.1	3.4	2.6	10.8
1979-80	1,820	1.3	0.6	4.5	1.3	10.3
1980-81	1,654	3.5	0.0	3.5	0.0	15.2
1981-82	1,742	4.7	0.4	2.1	0.9	7.8
1982-83	1,739	0.8	0.0	2.4	1.6	6.4
Ph.D.						
1973-74	1,828	1.2	0.2	0.8	0.8	12.7
1974-75	1,824	1.1	0.2	0.7	0.4	11.1
1975-76	1,623	0.6	0.0	2.8	0.8	12.4
1976-77	1,571	1.6	0.2	1.2	1.2	12.4
1977-78	1,525	2.8	0.3	1.8	1.0	12.2
1978-79	1,518	0.0	1.4	2.2	0.8	11.4
1979-80	1,550	0.6	0.0	2.8	0.6	10.1
1980-81	1,622	1.2	0.4	3.1	0.4	11.7
1981-82	1,708	0.6	0.0	2.5	0.6	12.0
1982-83	1,759	0.9	0.2	4.7	1.2	16.1

FIELD: Chemistry

SOURCE: 1980 Census of Occupations, Bureau of the Census

TABLE 6-12

CHEMISTS** IN ACADEMIC AND OTHER EMPLOYMENT BY SEX, RACE/ETHNICITY

	Total		Post-Secondary Teachers		All Other	
	No.	%	No.	%	No.	%
TOTAL	110,621	100.00	8,382	100.00	102,239	100.00
MALES	88,370	79.89	6,671	79.59	81,699	79.91
White*	76,765	69.39	6,040	72.06	70,725	69.18
Black*	3,719	3.36	148	1.77	3,571	3.49
Indian/Alaskan Native*	160	0.14	15	0.18	145	0.14
Asian/Pacific Isl.*	5,673	5.13	351	4.19	5,322	5.21
Other Race*	142	0.13	0	0.00	142	0.14
Hispanic	1,911	1.73	117	1.40	1,794	1.75
FEMALES	22,251	20.11	1,711	20.41	20,540	20.09
White*	17,830	16.12	1,531	18.27	15,849	15.50
Black*	1,514	1.37	58	0.69	1,456	1.42
Indian/Alaskan Native*	56	0.05	0	0.00	56	0.05
Asian/Pacific Isl.*	2,431	2.22	83	0.99	2,348	2.30
Other Race*	39	0.04	0	0.00	39	0.04
Hispanic	831	0.75	39	0.47	792	0.77

* Non-Hispanic

** Except Biochemists

SOURCE: Salaries 1985, American Chemical Society, October 1985

TABLE 6-13

DISTRIBUTION OF NON-ACADEMIC ACS MEMBER CHEMISTS BY AGE, HIGHEST DEGREE AND SEX, 1985

AGE LEVEL	BACHELOR'S		MASTER'S		DOCTOR'S	
	% Men	% Women	% Men	% Women	% Men	% Women
20 - 24	5.2	17.8	0.5	1.6	0.0	0.0
25 - 29	15.5	32.3	9.8	22.2	5.2	14.6
30 - 34	15.3	18.1	16.9	22.5	14.6	27.0
35 - 39	11.0	8.4	15.8	16.6	16.7	18.2
40 - 44	10.1	9.1	13.7	15.8	21.0	17.7
45 - 49	7.0	3.6	7.7	6.5	9.8	7.8
50 - 54	9.9	3.0	10.2	5.3	11.5	5.5
55 - 59	12.5	3.5	12.5	5.2	10.3	5.4
60 - 64	9.7	2.4	9.5	2.7	7.4	2.5
65 - 69	2.6	0.4	2.2	0.2	2.2	0.5
70 and over	0.1	0.0	0.1	0.2	0.1	0.0
No Response	1.3	1.4	1.1	1.4	1.1	0.7
Total	100.2	100.0	100.0	100.2	99.9	99.9

FIELD: Chemistry

SOURCE: 1976, 1978 and 1979 Report of Chemists' Salaries and Employment Status and Salaries 1981-85, , Office of Manpower Studies, American Chemical Society, July 1976, June 1978, July 1981, June 1983, and October 1985

TABLE 6-14

DISTRIBUTION OF ACS CHEMISTS BY DEGREE AND MINORITY CLASSIFICATION, 1976, 1978, 1981, 1983 AND 1985**

MINORITY CLASSIFICATION	1976				1978				1981				1983				1985**			
	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D	Total
Black	1.2	1.8	1.0	1.2	1.2	1.5	0.8	1.0	1.1	1.7	0.9	1.2	1.8	1.6	1.0	1.3	1.4	1.2	0.7	1.1
American Indian	0.2	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.4	0.0	0.1	0.2	0.2	0.2	0.1	0.1
Asian	2.1	2.8	4.2	3.3	2.0	4.1	6.3	4.7	2.4	4.4	7.3	5.3	3.0	4.5	8.1	6.0	2.7	5.1	8.4	5.8
Hispanic	0.7	0.8	0.5	0.6	0.8	0.9	0.7	0.7	0.7	0.7	0.5	0.6	1.0	1.1	0.8	0.9	1.2	1.0	0.7	0.9
All Minorities	4.2	5.4	5.9	5.3	4.1	6.7	7.9	6.5	4.7	7.0	8.8	7.2	6.2	7.2	10.0	8.4	6.3	8.4	10.7	8.7
Non-Minority	95.8	94.6	94.1	94.7	95.9	93.3	92.2	93.5	94.1	91.9	90.3	91.2	92.6	91.6	88.8	90.2	92.9	90.6	88.2	90.2

** Includes only non-academic ACS members who responded to the survey.

TABLE 6-15

DISTRIBUTION OF ACS CHEMISTS BY SEX AND MINORITY CLASSIFICATION, 1976, 1978, 1979, 1981 1982, 1983 and 1985*

MINORITY CLASSIFICATION	1976		1978		1981			1982			1983			1985		
	Men	Women	Men	Women	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Black	1.0	2.8	1.0	1.3	0.9	3.6	1.2	0.9	1.3	1.0	1.1	2.4	1.3	0.9	1.8	1.1
American Indian	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Asian	3.0	6.9	4.5	6.2	5.2	6.7	5.3	5.3	7.4	5.5	5.9	6.7	6.0	5.6	6.4	5.7
Hispanic	0.6	0.9	0.7	0.9	0.6	0.9	0.6	0.7	0.8	0.7	0.8	1.2	0.9	0.8	1.2	0.9
All Minorities	4.8	10.7	6.3	8.5	7.6	12.2	8.8	7.1	9.6	7.4	8.0	10.4	8.4	8.4	10.2	8.7
Non-Minority	95.2	89.3	93.6	91.6	92.4	87.8	91.2	91.9	89.8	91.2	91.0	88.8	90.2	90.7	89.2	90.3

* Includes only ACS members who responded to survey.
Note: Totals may not add to 100% due to no responses

FIELD: Chemistry

SOURCE: Salaries 1985, American Chemical Society, October 1985

TABLE 6-16

ACS MEMBER CHEMISTS EMPLOYED FULL TIME IN PRIVATE INDUSTRY BY WORK FUNCTION, HIGHEST DEGREE AND SEX, 1985

WORK FUNCTION	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
Management R&D	581	45	7.7	455	50	11.0	1,959	69	3.5
Basic Research	437	162	37.1	360	103	28.6	1,498	127	8.5
Applied R&D	1,925	393	20.4	1,441	261	18.1	3,769	282	7.5
Gen. Management	463	48	10.4	280	31	11.1	300	13	4.3
Marketing	630	81	12.9	332	37	11.1	255	15	5.9
Prod. & Qual. Control	1,414	321	22.7	498	75	15.1	272	17	6.3
Forensic	322	92	28.6	129	24	18.6	99	10	10.1
Writing/Editing	58	36	62.1	54	31	57.4	39	11	28.2
Data Processing	10	2	20.0	17	4	23.5	15	0	0.0
Consulting	91	13	14.3	78	5	6.4	92	6	6.5
Other	238	73	30.7	136	26	19.1	134	14	10.4
TOTAL	6,169	1,266	20.5	3,780	647	17.1	8,432	564	6.7

SOURCE: Salaries 1985, American Chemical Society, October 1985

TABLE 6-17

ACS MEMBER CHEMISTS EMPLOYED FULL TIME IN PRIVATE INDUSTRY BY WORK SPECIALTY, HIGHEST DEGREE AND SEX, 1985

WORK SPECIALTY	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
Biochemistry	115	47	40.9	119	34	28.6	485	62	12.8
Agric./Food	238	47	19.4	164	29	7.7	416	25	6.0
Analytical	2,198	537	24.4	1,129	209	18.5	1,409	127	9.0
Environmental	412	78	18.9	250	40	16.0	303	28	9.2
Organic	797	150	18.8	569	96	37.1	1,673	82	4.9
Inorganic	228	33	14.5	133	24	18.0	542	35	6.5
Pharmaceutical	298	88	29.5	230	60	26.1	468	45	9.6
Med./Clinical	104	39	37.5	120	32	26.7	433	36	8.3
Physical	188	31	16.5	118	21	17.8	785	47	6.0
General	348	52	14.9	147	20	13.6	175	12	6.9
Polymer	1,083	144	13.3	735	77	10.5	1,871	105	5.6
Other	275	67	24.4	185	39	21.1	357	22	6.2
TOTAL	6,284	1,313	20.9	3,899	681	17.5	8,917	626	7.0

FIELD: Chemistry

SOURCE: Women Chemists 1980, American Chemical Society, September 1981

TABLE 6-18

WOMEN ON CHEMISTRY FACULTIES, 1979-1980

DEGREE GRANTED BY INSTITUTIONS	TOTAL FACULTY	TOTAL WOMEN	FACULTY RANK OF WOMEN			TOTAL NO. OF INSTITUTIONS IN GROUP	INSTITUTIONS WITH NO WOMEN ON CHEM. FACULTY
			PROF.	ASSOC. PROF.	ASST. PROF.		
PH.D. Chemistry*	4,253	132 (3.1%)	29 (22.0%)	41 (31.1%)	62 (47.0%)	188	95 (50.5%)
PH.D. Biochemistry*	2,351	227 (9.7%)	47 (20.7%)	77 (33.9%)	103 (45.4%)	139	29 (20.9%)
M.S.-B.S. Chemistry Women's Colleges	218	107 (49.1%)	42 (40.4%)	28 (26.9%)	34 (32.7%)	64	16 (25.0%)
M.S.-B.S. Chemistry Other Colleges	5,270	398 (7.6%)	115 (28.9%)	136 (34.2%)	147 (36.9%)	831	552 (66.4%)
Total All M.S.-B.S.** Chemistry Colleges	5,488	502 (9.1%)	157 (31.2%)	164 (32.7%)	181 (36.1%)	895	568 (63.5%)

*Three institutions did not report. ** Three women were unranked.

Source: Women Chemists Committee of the American Chemical Society

TABLE 6-19

Women on Chemistry Faculties at BS/MS Institutions and Institutions with no Women on Faculty

	Total	1977 Women	% W	Total	1980 Women	% W	Total	1983 Women	% W
Faculty	5,015	504*	10.0	4,704	495°	10.5	4,944	546	11.0
Professor		144			153			177	
Assoc. Prof.		169			140			158	
Ass't. Prof.		188			200			211	
		1977			1980			1983	
No. of Institutions		897			838			865	
No. with No Women		567			499			514	
% with No Women		62.8			59.6			59.4	

*No rank given for 3 women °No rank given for 2 women

SOURCE: Compiled for the Women Chemists Committee of the American Chemical Society by Dr. Agnes Ann Green

TABLE 6-20

WOMEN ON CHEMISTRY AND BIOCHEMISTRY FACULTIES, IN DOCTORAL INSTITUTIONS, 1970-71 THRU 1982-83

	Full-time Staff	WOMEN FACULTY					No. of Depts.	% All Male Depts.
		Total W	% W	Professor	Assoc. Prof.	Ass't Prof.		
Chemistry								
1970-71	4,091	61	1.5	15	23	23	208	74.0
1972-73	4,242	89	2.1	16	29	43	210	69.0
1974-75	4,056	92	2.3	19	29	44	210	66.0
1976-77	4,125	110	2.7	27	28	55	213	62.0
1978-79	4,250	140	3.3	33	41	66	216	48.0
1980-81	4,345	159	3.7	37	44	78	221	51.0
1982-83	4,455	185	4.1	46	49	90	221	44.0
BIOCHEMISTRY								
1976-77	2,196	188	8.6	40	52	96	139	27.0
1978-79	2,351	227	9.7	47	77	103	139	21.0
1980-81	2,274	213	9.4	54	74	85	130	21.0
1982-83	2,580	220	8.5	50	78	92	136	23.0

FIELD: Physics and Astronomy

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973. Doctorate Recipients from United States Universities Summary Reports, 1972-1984, National Research Council

TABLE 6-21

DOCTORATES AWARDED FROM 1920 to 1984 BY SUBFIELD OF DOCTORATE AND SEX

	CY 1920-FY 1972			FY 1973-FY 1977			FY 1978-FY 1982			FY 1983			FY 1984		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Physics and Astronomy, Subtotal	23,187	610	2.6	6,601	301	4.6	5,187	349	6.7	1,042	74	7.1	1,080	79	7.3
Acoustics	187	0		59	2	3.4	74	5	6.8	14	1	7.1	21	0	
Astronomy & Astrophysics[1]	821	89	10.8												
Astronomy[1]	206	14	6.8	321	31	9.7	276	35	12.7	50	8	16.0	42	4	9.5
Astrophysics[1]	250	17	6.8	342	18	5.3	309	20	6.5	65	7	10.8	56	8	14.3
Atomic & Molecular[2]	1,650	30	1.8	602	20	3.3	390	23	5.9	71	6	8.5	77	3	3.9
Electromagnetism[3]	354	4	1.2	44	2	4.5	16	0							
Electron										1	0		2	0	
Elementary Particles[4]	2,425	64	2.6	760	35	4.6	606	27	4.5	136	3	2.2	138	8	5.8
Fluids[5]	347	10	2.9	106	3	2.8	69	7	10.1	15	2	13.3	11	1	9.1
Mechanics[5]	97	0		15	2	13.3									
Nuclear[3]	2,549	49	1.9	645	23	3.6	368	23	2.3	90	6	6.7	72	8	11.1
Optics[6]	204	2	1.0	173	5	2.9	218	6	2.8	50	2	4.0	53	3	6.7
Plasma[6]	326	2	0.6	331	7	2.1	323	16	5.0	72	2	2.8	73	3	4.1
Solid State	4,068	81	2.0	1,609	74	4.6	1,173	87	7.4	221	21	9.5	258	18	7.4
Thermal[7]	175	6	3.4	54	3	5.3	30	0							
Theoretical[8]	559	9	1.6												
Polymer[9]													8	0	
Physics, General[10]	2,770	85	3.1	889	49	5.5	852	57	6.7	150	9	6.0	170	12	7.1
Physics, Other	6,157	148	2.4	637	37	5.8	483	43	8.9	97	7	7.2	99	11	11.1

[1] Broken out into two separate fields in 1968.
[2] Originally shown as "Electricity & Magnetism." Changed to "Electromagnetism" in 1966. Dropped in 1982.
[3] In 1962, "Nuclear Physics" was separated into "Elementary Particles" and "Nuclear Structure." In 1983, it is named "Nuclear" and "Atomic & Molecular".
[4] Added in 1960.
[5] Originally shown as "Mechanics & Heat." In 1960, it was separated into two fields, "Mechanics" and "Heat" (thermal). Dropped in 1977.
[6] Added in 1968.
[7] In 1962, "Heat" (thermal) was changed to "Thermal Phenomena" and to "Thermal Physics" in 1966. Dropped in 1982.
[8] Dropped in 1962.
[9] Added in 1984.
[10] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Astronomy

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-22

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	286	60	21.0	197	25	12.7
1960-61 thru 1969-70	841	117	13.9	667	81	12.1
1970-71	102	8	7.8	100	12	12.0
1971-72	139	23	16.5	89	11	12.3
1972-73	110	23	20.9	89	11	12.4
1973-74	152	33	21.7	82	11	13.4
1974-75	115	20	17.4	110	14	12.7
1975-76	116	15	12.9	81	7	8.6
1976-77	122	19	15.6	68	14	20.6
1977-78	110	24	21.8	84	12	14.3
1978-79	93	20	21.5	97	15	15.5
1979-80	96	16	16.7	70	9	12.9
1980-81	98	19	19.4	51	7	13.7
1981-82	81	16	19.8	61	10	16.4
1982-83	75	20	26.7	58	11	19.0
TOTAL	2,536	433	17.1	1,906	250	13.1

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 6-23

DOCTORAL DEGREES BY SEX, 1920-1984

Y E A R	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	386	61	15.8
FY 1960 thru FY 1969	538	35	6.5
FY 1970-72	170	12	7.0
FY 1973	64	4	6.2
FY 1974	56	5	8.9
FY 1975	60	8	13.3
FY 1976	78	7	9.0
FY 1977	63	7	11.1
FY 1978	64	4	6.3
FY 1979	58	6	10.3
FY 1980	52	7	13.5
FY 1981	50	7	14.0
FY 1982	52	11	21.2
FY 1983	50	8	16.0
FY 1984	42	4	9.5
TOTAL	1,783	186	10.4

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Physics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-24

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	35,769	1,613	4.5	10,795	425	3.9
1960-61 thru 1969-70	49,084	2,580	5.3	18,629	883	4.7
1970-71	5,076	343	6.8	2,194	152	6.9
1971-72	4,645	323	7.0	2,035	159	7.8
1972-73	4,268	313	7.3	1,755	113	6.4
1973-74	3,962	337	8.5	1,662	136	8.2
1974-75	3,716	362	9.7	1,577	124	7.9
1975-76	3,544	388	10.9	1,451	132	9.1
1976-77	3,420	358	10.5	1,319	126	9.6
1977-78	3,330	369	11.1	1,294	123	9.5
1978-79	3,338	399	12.0	1,319	135	10.2
1979-80	3,397	434	12.8	1,192	118	9.9
1980-81	3,441	432	12.6	1,294	115	8.9
1981-82	3,472	460	13.2	1,284	156	12.1
1982-83	3,793	482	12.7	1,351	158	11.7
TOTAL	**134,245**	**9,193**	**6.9**	**49,151**	**3,055**	**6.2**

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 6-25

DOCTORAL DEGREES BY SEX, 1920-1984

YEAR	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	7,948	189	2.4
FY 1960 thru FY 1969	9,285	178	1.9
FY 1970-72	4,677	123	2.6
FY 1973	1,459	50	3.4
FY 1974	1,278	52	4.1
FY 1975	1,233	62	5.3
FY 1976	1,157	47	4.1
FY 1977	1,086	57	5.2
FY 1978	1,002	48	4.8
FY 1979	1,050	67	6.4
FY 1980	933	60	6.4
FY 1981	965	67	7.0
FY 1982	961	73	7.6
FY 1983	992	66	6.7
FY 1984	1,038	75	7.2
TOTAL	**35,064**	**1,214**	**3.5**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Physics

SOURCE: Enrollments and Degrees, American Institute of Physics, AIP R-151.22, June 1985

TABLE 6-26

Physics Degrees Awarded by Sex and Minority Group, 1983-84

(Includes Foreign Nationals)

Type of degree	Sex	Total no. of degrees	Black	Am. Ind.	Mex. Am.	Hispanic	Oriental	Asian Ind.	Arab
Bachelor's	Men	4210	102	13	10	19	74	10	17
	Women	668	22	1	2	4	17	2	0
	Total	4878	124	14	12	23	91	12	17
Master's enroute	Men	774	7	0	1	10	74	16	17
	Women	92	0	0	1	2	8	6	2
	Total	866	7	0	2	12	82	22	19
Terminal master's	Men	578	10	0	1	2	14	14	7
	Women	77	1	0	0	0	5	2	1
	Total	655	11	0	1	2	19	16	8
Doctorate	Men	903	15	2	1	9	66	32	26
	Women	68	0	1	0	1	14	3	1
	Total	971	15	3	1	10	80	35	27

*Minorities in AIP surveys are defined as groups with a low representation in the physics community, but ones whose participation has aroused considerable interest.

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207.17, 1985

TABLE 6-27

CHARACTERISTICS OF THE GRADUATE ASTRONOMY STUDENT POPULATION, 1983-84

CHARACTERISTICS	ALL GRAD. STUDENTS	% M	% W	FIRST-YEAR GRAD. STUDENTS	% M	% W	DOCTORATE RECIPIENTS	% M	% W
Total Population	688			154			74		
No. of Respondents	461	84	16	90	78	22	54	84	16
Citizenship									
U.S.	78%			72%			83%		
Foreign	22%			28%			17%		

FIELD: Physics

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207-11, 1979; R-207.12, 1980; R-207.13, 1981; R-207.14, 1982, R-207.16, 1984, and R-207.17, 1985.

TABLE 6-28

GRADUATE PHYSICS STUDENTS BY MINORITY GROUP AND SEX, 1978-79, 1980-81, 1982-83 AND 1983-84

	1978-1979			1980-1981			1982-1983			1983-1984		
MINORITY GROUP	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY
Black	77	7	1.2	94	10	1.4	78	9	1.2	68	8	1.1
U.S.				70	10	1.1	46	7	0.7	39	6	0.6
Foreign				24	0	0.4	32	2	0.5	29	2	0.5
American Indian	5	2	0.1	12	2	0.2	9	1	0.1	12	2	0.2
Puerto Rican	16	4	0.3	21	3	0.3	17	2	0.3	23	5	0.4
Mexican American	27	3	0.4	15	0	0.2	11	2	0.2	13	1	0.2
Other Hispanic	116	18	1.8	139	12	2.1	167	11	2.6	164	19	2.6
U.S.				18	2	0.3	23	1	0.4	9	1	0.1
Foreign				121	10	1.9	144	10	2.2	155	18	2.4
Asian Indian	326	35	5.2	360	66	5.5	351	68	5.5	357	76	5.6
Oriental	633	68	10.0	700	94	10.8	934	139	14.5	1,054	151	16.5
U.S.	102	9	1.6	88	15	1.4	87	16	1.4	97	16	1.5
Foreign	531	59	8.4	612	79	9.4	847	123	13.2	957	135	15.0
Arab	146	13	2.3	171	12	2.6	210	27	3.3	193	22	3.0
Total Minority	1,346	150	21.3	1,512	199	23.3	1,777	259	27.6	1,884	284	29.4
Total Respondents	6,334	507		6,498	650		6,442	709		6,401	768	
Total Population*	9,813			9,934			10,429			10,922		

*All numbers except total population are numbers of respondents. All percentages are calculated on resondents.

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207-17, 1985

TABLE 6-29

CHARACTERISTICS OF THE GRADUATE PHYSICS STUDENT POPULATION, 1983-84

			DEGREE RECIPIENTS	
CHARACTERISTICS	ALL GRADUATE STUDENTS	FIRST-YEAR GRADUATE STUDENTS	TERMINAL MASTERS	DOCTORATE RECIPIENTS
Total Population	10,922	2,855	657	971
Number of Respondents	6,401	1,337	257	542
Percent Women	12%	12%	14%	8%
Percent Men	88%	88%	86%	92%
Percent U.S. Citizenship	65%	62%	80%	75%
Percent Foreign Citizenship	35%	38%	20%	25%

SOURCE: 1980 Census of Occupations, Bureau of the Census

TABLE 6-30

PHYSICISTS AND ASTRONOMERS IN ACADEMIC AND OTHER EMPLOYMENT, BY SEX, RACE/ETHNICITY

	Total		Post-Secondary Teachers		All Other	
	No.	%	No.	%	No.	%
TOTAL	27,887	100.00	5,414	100.00	22,473	100.00
MALES	26,135	93.72	4,882	90.17	21,253	94.57
White*	23,716	85.04	4,363	80.59	19,352	86.11
Black*	379	1.36	65	1.20	314	1.40
Indian/Alaskan Native*	36	0.13	6	0.11	30	0.13
Asian/Pacific Isl.*	1,455	5.22	303	5.60	1,152	5.13
Other Race*	93	0.33	12	0.22	81	0.36
Hispanic	457	1.64	133	2.46	324	1.44
FEMALES	1,752	6.29	532	9.83	1,220	5.43
White*	1,554	5.57	452	8.35	1,102	4.90
Black*	57	0.20	16	0.30	41	0.18
Indian/Alaskan Native*	0	0.00	0	0.00	0	0.00
Asian/Pacific Isl.*	78	0.28	38	0.70	40	0.18
Other Race*	4	0.01	4	0.07	0	0.00
Hispanic	59	0.21	22	0.41	37	0.16

* Non-Hispanic

SOURCE: CSWP Gazette, Issue #9, March 1, 1983, Committee on the Status of Women in Physics, American Physical Society

TABLE 6-31

WOMEN PHYSICISTS IN INDUSTRIAL LABS, 1982

Laboratory	Total Physicists	Women Physicists	Percent Women	Physicist Research Managers	Women Physicist Research Mgrs.	Percent Women
GTE, Waltham	51	3	5.9	7	0	0
RCA, Princeton[1]	xxx	xxx	xxx	xxx	xxx	xxx
Bell Labs Research Physics Division	152	11	7.2	5 mgrs 16 dept. heads	0 0	0 0
Exxon, Linden Corp Research Lab	37 MTS 15 temps	2 2	5.4 13.3	3	0	0
Stanford Research Institute[2]	25 PhD 7 MS 12 BS	1 0 0	4.0 0 0	xxx xxx xxx	xxx xxx xxx	xxx xxx xxx
Westinghouse [3]	xxx	xxx	xxx	xxx	xxx	xxx
GE, Schenectady R and D	92	1	1.1			
General Motors Physics Dept	36	1	2.8	3	0	0
IBM, Yorktown Hts[4]						
Ford Motor [5]	33	2	6.1	1	0	0
Xerox, Webster [6] Corp Research Cntr	45-50 MTS 6 postdoc	1 1	2 16.7	-		

[1] Refused to divulge information. To the best of our knowledge, there are no women physicists at RCA Laboratories.
[2] SRI refused to divulge information on managers
[3] Refused to divulge information.
[4] Data not available at press time, but it is known that IBM has several women physicists on its technical staff.
[5] There are 2 physicist "staff scientists" among the 33 MTS and 1 is a woman.
[6] There are 3 physicist "fellows of the technical staff" among the MTS and 1 is a woman.

FIELD: Earth, Atmospheric and Marine Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipeints from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 6-32

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Earth, Atmospheric & Marine Sciences, Subtotal	8,341	221	2.6	2,925	178	6.1	3,136	342	10.9	512	106	20.7	614	106	17.3
Atmospheric Physics & Chemistry[1]							89	3	3.4	19	2	10.5	11	0	0.0
Atmospheric Dynamics[1]							116	9	7.8	11	5	45.5	26	2	8.0
Meteorology[1]	671	11	1.6	331	22	6.6				13	4	30.8	28	2	7.1
Atmosph./Meteorol. Sci., General[1]							105	12	11.4	13	3	23.1	5	1	20.0
Atmosph./Meteorol. Sci., Other[1]							158	13	8.2	20	3	15.0	12	3	25.0
Geology[2]										83	15	18.1	124	22	17.7
Geochemistry[3]	172	10	5.8	243	17	7.0	258	34	13.2	45	3	6.7	43	7	16.3
Geophysics & Seismology[4]	698	8	1.1	386	18	4.7	364	24	6.6	56	16	28.6	68	7	10.3
Paleontology[3]	499	18	3.6	193	25	13.0	131	28	21.4	17	0	-	35	6	17.1
Mineralogy, Petrology[3]	214	15	7.0	236	12	5.1	144	25	17.4	20	4	20.0	28	6	21.4
Stratigraphy, Sedimentation	908	12	1.3	243	13	5.3	195	27	13.9	20	5	25.0	16	2	12.5
Geomorphology & Glacial Geology[2]	207	5	2.4	128	4	3.1	87	13	14.9	9	1	11.1	9	1	11.1
Applied Geology[2]										6	2	33.3	7	2	28.6
Structural Geology[2]	284	6	2.1	96	4	4.2	128	14	10.9						
Geological Science, General[2]										11	2	18.2	10	3	30.0
Geological Science, Other[2]										17	1	5.9	25	4	16.0
Environmental Science[5]							245	37	15.1	41	9	18.4	45	9	20.0
Hydrology & Water Resources	127	1	0.8	103	16	15.5	124	7	5.7	12	8	66.7	18	2	11.1
Oceanography	524	11	2.1	456	34	7.5	436	48	11.0	71	16	22.5	78	21	26.9
Marine Sciences[6]							155	13	8.4	18	4	22.2	21	6	28.6
Physical Science, Other[5]										10	3	30.0	3	0	0.0
Earth Sciences, General[5]	2,372	74	3.1	201	10	5.0	215	18	8.4						
Earth Sciences, Other[5]	362	22	6.1	151	13	8.6	111	14	12.6						

1 "Meteorology" subdivided in 1976 to "Atmospheric Physics & Chemistry"; "Atmospheric Dynamics"; and "Atmospheric Sciences." In 1983 added "Meteorology," "Atmospheric" and "Meteorological Sciences," "General" and "Other."

2 "Geology" changed to "Structural Geology" in 1962; broken out as "Geology," "Applied Geology," "Geological Sciences, Other" and "Geological Sciences, General," in 1983.

3 Originally specified as "Geochemistry." In 1962 the field was extended to include "Mineralogy" and "Petrology." In 1968, this specification was broken out into "Geochemistry" and "Mineralogy, Petrology."

4 Originally specified as "Geophysics." Changed to "Solid Earth Geophysics" in 1962 and to "Solid Earth & Atmospheric Geophysics" in 1968; to "Geophysics, Solid Earth" in 1976; and to "Geophysics & Seismology" in 1983.

5 Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields. In 1978, "Environmental Sciences,"General," and "Other" were added. In 1983, "Environmental Sciences" became a separate field and "Physical Sciences, Other" was added.

6 Added in 1978 as "Marine Sciences, Other". In 1983, "Marine Sciences."

FIELD: Geological and Earth Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-33

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	29,222	1,187	4.1	6,886	239	3.5
1960-61 thru 1969-70	18,293	1,657	9.1	7,583	485	6.4
1970-71	3,330	379	11.4	1,084	113	10.4
1971-72	3,861	489	12.7	1,299	150	11.5
1972-73	4,273	544	12.7	1,416	183	12.9
1973-74	4,834	800	16.5	1,604	201	12.5
1974-75	4,830	839	17.4	1,512	198	13.5
1975-76	4,864	916	18.8	1,515	218	14.4
1976-77	5,521	1,192	21.6	1,619	228	14.1
1977-78	5,885	1,318	22.4	1,760	295	16.8
1978-79	6,078	1,428	23.5	1,772	326	18.4
1979-80	5,536	1,366	24.7	1,740	336	19.3
1980-81	6,106	1,532	25.1	1,844	416	22.6
1981-82	6,425	1,697	26.4	1,971	459	23.3
1982-83	6,902	1,783	25.8	1,822	428	23.5
TOTAL	115,960	17,172	14.8	35,427	4,275	12.1

NOTE: Includes Geology, Geochemistry, Geophysics, Earth Sciences, Paleontology, Oceanography and Metallurgy.

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 6-34

DOCTORAL DEGREES* BY SEX, 1920-1984

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959†	3,179	101	3.2
FY 1960 thru FY 1969	3,521	69	2.0
FY 1970 thru FY 1972	1,641	51	3.1
FY 1973	577	22	3.8
FY 1974	570	29	5.1
FY 1975	556	22	4.0
FY 1976	584	53	9.1
FY 1977	638	52	8.1
FY 1978	623	61	9.8
FY 1979	646	58	9.0
FY 1980	628	64	10.2
FY 1981	582	56	9.6
FY 1982	657	103	15.7
FY 1983	637	97	15.2
FY 1984	614	106	17.3
TOTAL	15,653	944	6.0

*Includes Earth, Marine, Atmospheric and Environmental Sciences.
†Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

Field: Geosciences

Source: Student Enrollment in Geoscience Departments 1971-72, 1974-75, 1977-78, 1980-81, 1981-82, American Geological Institute

TABLE 6-35

DEGREES GRANTED IN THE GEOSCIENCES BY LEVEL, SEX AND ETHNIC ORIGIN 1971-72, 1974-75, 1977-78, 1980-81 and 1981-82

	Bachelor's		Master's		Doctorates		Total	
	No.	%	No.	%	No.	%	No.	%
1971-72								
TOTAL	3,804	66.80	1,332	23.40	560	9.80	5,696	100.00
Women	473	12.40	146	11.00	28	5.00	647	11.40
TOTAL MINORITY	29	0.76	40	3.00	3	0.54	72	1.26
Blacks	13	0.34	27	2.00	2	0.36	42	0.74
Hispanics	16	0.42	12	0.90	1	0.18	29	0.51
Asians								
Am. Indians			1	0.08			1	0.02
1974-75								
TOTAL	3,650	68.40	1,267	23.70	416	7.80	5,333	100.00
Women	707	19.40	184	14.50	27	6.50	918	17.20
TOTAL MINORITY	68	1.86	34	2.68	6	1.44	108	2.02
Blacks	14	0.38	15	1.18			29	0.54
Hispanics	24	0.65	4	0.31	4	0.96	32	0.60
Asians	29	0.79	15	1.18	2	0.48	46	0.86
Am. Indians	1	0.27					1	0.01
1977-78								
TOTAL	5,982	72.60	1,799	21.80	455	5.50	8,236	100.00
Women	1,287	21.50	316	17.60	49	10.80	1,652	20.10
TOTAL MINORITY	107	1.79	21	1.17	10	2.20	138	1.68
Blacks	38	0.64	5	0.28	1	0.22	44	0.53
Hispanics	36	0.60	6	0.33	2	0.44	44	0.53
Asians	29	0.49	9	0.50	6	1.32	44	0.53
Am. Indians	4	0.07	1	0.06	1	0.22	6	0.07
1980-81								
TOTAL	6,879	73.36	2,014	21.48	484	5.16	9,377	100.00
Women	1,684	24.48	441	21.90	85	17.56	2,210	23.57
TOTAL MINORITY	177	2.57	36	1.79	12	2.48	225	2.40
Blacks	46	0.67	3	0.15	2	0.41	51	0.54
Hispanics	84	1.22	11	0.55	3	0.62	98	1.05
Asians	42	0.61	20	0.99	7	1.45	69	0.74
Am. Indians/ Alaskan Natives	5	0.07	2	0.10			7	0.07
1981-82								
TOTAL	7,253	75.66	1,868	19.49	465	4.85	9,586	100.00
Women	1,783	24.58	426	22.81	78	16.77	2,287	23.86
TOTAL MINORITY	157	2.16	32	1.71	13	2.80	202	2.11
Blacks	40	0.55	4	0.21			44	0.46
Hispanics	87	1.20	12	0.64	7	1.51	106	1.11
Asians	24	0.33	16	0.86	6	1.29	46	0.48
Am. Indians/ Alaskan Natives	6	0.08					6	0.06

FIELD: Geosciences

SOURCE: Student Enrollment in Geoscience Departments, 1981 through 1985, American Geological Institute

TABLE 6-36

ENROLLMENT IN GEOSCIENCE DEPARTMENTS BY EDUCATIONAL LEVEL, FIELD AND SEX, 1980-83

		FRESHMAN AND SOPHOMORE			JUNIOR			SENIOR			MASTER'S			DOCTORATES		
		1980-81	1981-82	1982-83	1980-81	1981-82	1982-83	1980-81	1981-82	1982-83	1980-81	1981-82	1982-83	1980-81	1981-82	1982-83
Geology	Total	9,113	10,390	9,943	7,511	8,009	8,574	8,425	8,756	10,210	4,883	5,060	5,007	1,257	1,116	1,150
	Women	2,114	2,307	2,263	1,817	2,013	2,122	2,059	2,151	2,557	1,164	1,249	1,270	245	225	250
	% W	23.2	22.2	22.8	24.2	25.1	24.7	24.4	24.6	25.0	23.8	24.7	25.4	19.5	20.0	21.7
Geophysics	Total	290	303	449	279	221	362	304	355	383	534	499	508	359	393	422
	Women	64	59	99	63	52	74	53	78	84	88	84	90	52	65	66
	% W	22.1	19.5	22.0	22.6	23.5	20.4	17.4	22.1	21.9	16.5	16.8	17.7	14.5	16.0	15.6
Oceanography, Marine Science	Total	495	487	507	188	198	227	240	202	226	781	740	781	681	699	677
	Women	87	112	110	40	30	49	56	36	43	227	218	216	142	160	169
	% W	19.2	23.0	21.7	21.3	15.1	21.6	23.3	17.8	19.0	29.1	29.5	27.7	20.9	22.9	25.0
Geological Engineering	Total	621	738	1,040	336	405	656	426	483	856	128	137	292	36	51	95
	Women	144	159	203	67	76	104	72	98	120	22	24	46	0	1	7
	% W	23.2	21.5	19.5	19.9	1.5	15.9	16.9	20.3	14.0	17.2	17.5	15.8	0.0	5.2	7.4
Geophysical Engineering	Total	96	110	151	60	80	73	79	94	104	92	84	78	8	18	17
	Women	21	23	35	14	20	10	14	14	23	13	11	15	0	0	1
	% W	21.9	20.9	23.2	23.3	25.0	13.7	17.7	14.9	22.1	14.1	13.1	16.7	0.0	0.0	5.9
Geochemistry	Total	17	25	7	17	27	14	25	22	18	226	182	124	180	195	169
	Women	1	5	0	0	3	3	9	4	3	67	50	42	33	45	42
	% W	5.9	20.0	0.0	0.0	11.1	21.4	36.0	18.2	16.7	29.7	27.5	33.9	18.3	13.1	24.9
Hydrology	Total	20	24	24	31	29	44	42	38	42	195	205	194	38	49	59
	Women	3	6	5	5	6	14	8	7	6	42	54	41	6	7	14
	% W	15.0	25.0	20.8	16.1	20.7	31.8	19.0	18.4	14.3	21.5	26.3	21.1	15.8	14.3	23.7
Mineralogy	Total	4	16	66	4	99	64	4	3	93	55	49	100	36	49	68
	Women	0	3	8	1	18	6	0	1	15	17	12	21	6	7	16
	% W	0.0	18.8	12.1	25.0	18.2	9.4	0.0	33.3	16.1	30.9	24.5	21.0	16.7	14.3	23.5
Paleontology	Total	8	25	9	13	89	22	8	21	13	120	94	87	96	105	83
	Women	1	7	2	5	19	5	1	6	4	43	31	26	22	31	24
	% W	12.5	28.0	22.2	38.5	21.3	22.7	12.5	28.6	30.8	35.8	33.0	29.9	22.9	29.5	28.9
Soil Science	Total	51	16	10	41	10	11	53	15	10	8	0	0	2	1	1
	Women	23	6	3	20	2	3	23	3	2	3	0	0	1	1	0
	% W	45.1	37.5	30.0	48.8	20.0	27.3	43.4	20.0	20.0	37.5	0.0	0.0	50.0	100.0	0.0
Environmental Science	Total	425	380	205	373	350	237	451	368	262	125	124	134	36	29	56
	Women	180	218	70	124	91	91	118	97	104	42	42	60	11	6	14
	% W	42.4	57.4	34.1	33.2	26.0	38.4	26.2	26.4	39.7	33.6	33.1	44.8	30.6	20.7	25.0
Earth Science, Teaching	Total	84	85	83	140	109	102	148	111	142	77	62	54	2	3	2
	Women	29	32	39	63	47	49	63	53	77	28	20	21	0	2	1
	% W	34.5	37.6	47.0	45.0	43.1	48.0	42.6	47.7	54.2	36.4	32.3	38.9	0.0	66.7	50.0
Earth Science, General	Total	613	639	653	461	433	459	535	580	542	146	113	152	79	71	98
	Women	166	183	158	117	127	132	176	179	138	38	30	23	12	12	17
	% W	27.1	28.6	24.2	25.4	29.3	28.8	32.9	30.9	25.5	26.0	26.5	15.1	15.2	16.9	17.3
ALL FIELDS	Total	11,795	13,238	13,147	9,454	10,059	10,845	10,738	11,046	12,901	7,370	7,349	7,511	2,810	2,759	2,897
	Women	2,833	3,120	2,995	2,336	2,504	2,662	2,652	2,727	3,176	1,794	1,825	1,869	530	558	621
	% W	24.0	23.6	22.8	24.7	24.9	24.5	24.7	24.7	24.6	24.3	24.8	24.9	18.9	20.2	21.4

FIELD: Geosciences

SOURCE: Unpublished data, American Geological Institute, October 1974 and Student Enrollment in Geoscience Departments 1975-76 to 1982-83, American Geological Institute

TABLE 6-37

STUDENT ENROLLMENT IN GEOSCIENCES, BY SEX 1972-73 TO 1982-83

Year	BACHELOR'S			MASTER'S			DOCTORATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1972-73	19,541	2,994	15.3	4,832	646	13.4	3,045	242	7.9
1973-74	21,329	4,002	18.8	4,783	670	14.0	2,997	292	9.7
1975-76	18,439	3,913	21.2	4,588	832	18.1	2,042	221	10.8
1976-77	24,464	5,312	21.7	5,759	1,070	18.6	2,686	395	14.7
1977-78	25,399	5,672	22.3	6,245	1,209	19.4	2,598	351	13.5
1978-79	28,674	6,733	23.5	6,413	1,372	21.4	2,699	420	15.6
1979-80	30,495	7,390	24.2	7,004	1,616	23.1	2,877	492	17.1
1980-81	31,987	7,821	24.5	7,370	1,794	24.3	2,810	530	18.9
1981-82	34,343	8,351	24.3	7,349	1,825	24.8	2,759	558	20.2
1982-83	36,893	8,833	23.9	7,511	1,869	24.9	2,897	621	21.4

TABLE 6-38

STUDENT ENROLLMENT IN GEOSCIENCES, BY MINORITY STATUS, 1973-74 TO 1982-83

MINORITY STATUS	1973-74		1975-76		1977-78		1978-79		1979-80		1980-81		1981-82		1982-83	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hispanic																
Bachelor's	265	1.24	246	1.33	263	1.04	256	.89	353	1.16	381	1.19	453	1.32	406	1.10
Master's	21	.44	42	.91	22	.35	33	.51	56	.80	54	.73	64	.87	83	1.11
Doctorates	11	.37	9	.44	7	.27	8	.30	11	.38	23	.82	18	.65	28	.97
Total	297	1.02	297	1.18	292	.85	297	.79	420	1.04	458	1.09	535	1.20	517	1.09
Black																
Bachelor's	216	1.01	173	.93	155	.61	374	1.30	313	1.03	450	1.41	317	.92	245	.66
Master's	58	1.21	43	.93	27	.43	29	.45	29	.41	41	.56	40	.54	48	.64
Doctorates	6	.20	10	.48	3	.12	3	.11	7	.24	9	.32	5	.18	7	.24
Total	280	.96	226	.90	185	.54	406	1.07	349	.86	500	1.19	362	.81	300	.63
Asian/Pacific Islander																
Bachelor's	116	.54	76	.41	91	.36	111	.39	122	.40	170	.53	137	.40	151	.41
Master's	27	.56	44	.95	24	.38	44	.69	51	.73	107	1.45	94	1.28	107	1.42
Doctorates	18	.60	22	1.07	21	.81	18	.67	32	1.11	69	2.46	59	2.14	86	2.97
Total	161	.55	142	.56	136	.40	173	.46	205	.51	346	.82	290	.65	344	.73
Native American																
Bachelor's	33	.15	18	.09	31	.12	24	.08	41	.13	35	.11	31	.09	65	.18
Master's	5	.10	2	.04	3	.05	1	.003	2	.03	3	.04	3	.04	8	.11
Doctorates	1	.03	4	.19	3	.12	2	.07	3	.10	1	.04	3	.11	6	.21
Total	39	.13	24	.09	37	.11	27	.07	46	.11	39	.09	37	.08	79	.17

FIELD: Environmental Sciences

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 6-39

ENVIRONMENTAL SCIENTISTS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	Total		Earth/Env/Marine Science Teachers		ALL OTHER					
					Geologists/ Geodicists		Survey/Mapping Scientists		Atmosp/Space Scientists	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**88,450**	**100.00**	**2,274**	**100.00**	**46,127**	**100.00**	**31,634**	**100.00**	**8,415**	**100.00**
MALES	**80,188**	**90.66**	**1,904**	**83.73**	**40,985**	**88.05**	**30,313**	**95.82**	**6,986**	**83.02**
White*	75,268	85.10	1,827	80.34	38,969	84.48	28,089	88.79	6,383	75.85
Black*	1,492	1.69	10	0.44	488	1.06	713	2.25	281	3.34
Indian/Alaskan Native*	414	0.47	5	0.22	85	0.18	279	0.88	45	0.53
Asian/Pacific Isl. *	987	1.12	38	1.67	621	1.35	222	0.70	106	1.26
Other Race*	100	0.11	12	0.53	46	0.10	16	0.05	26	0.31
Hispanic	1,927	2.23	12	0.53	776	1.68	994	3.14	145	1.72
FEMALES	**8,262**	**9.34**	**370**	**16.27**	**5,142**	**11.15**	**1,321**	**4.18**	**1,429**	**16.98**
White*	7,502	8.48	342	15.04	4,768	10.34	1,173	3.71	1,219	14.49
Black*	378	0.43	0	0.00	205	0.44	44	0.14	129	1.53
Indian/Alaskan Native*	25	0.03	0	0.00	10	0.02	13	0.04	2	0.02
Asian/Pacific Isl. *	136	0.15	9	0.40	91	0.20	10	0.03	26	0.31
Other Race*	13	0.01	0	0.00	5	0.01	8	0.03	0	0.00
Hispanic	208	0.24	19	0.84	63	0.14	73	0.23	53	0.63

* Non-Hispanic

FIELD: Mathematics

SOURCE: Doctorates Awarded from 1920 tso 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973. Doctorate Recipients from United States Universities Summary Report 1972 through 1984, National Research Council

TABLE 6-40

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
MATHEMATICS SUBTOTAL	14,353	1,001	7.0	5,529	1,475	26.7	3,799	541	14.2	701	113	16.1	699	115	16.5
Applied Math	1,424	52	3.7	575	29	5.0	508	67	13.2	125	21	16.8	108	16	14.8
Algebra	1,603	154	9.6	594	111	18.7	366	80	21.9	55	8	14.5	65	13	20.0
Analysis & Functional Analysis[1]	2,641	144	5.5	930	88	9.5	523	58	11.1	76	8	10.5	70	12	17.1
Geometry	396	41	10.4	145	16	11.0	143	11	7.7	44	6	13.6	27	6	22.2
Logic	306	25	8.2	143	16	11.0	104	7	6.7	21	2	9.5	25	1	4.0
Number Theory	296	39	13.2	139	16	11.5	115	10	8.7	19	4	21.1	27	4	14.8
Probability, Math. Statistics[2]	1,410	82	5.8	804	88	10.9	813	149	18.3	151	27	17.9	182	31	17.0
Topology	1,128	55	4.9	459	46	10.0	273	36	13.2	44	9	20.5	42	10	23.8
Topological Algebraic Structure[3]	176	4													
Computing Theory & Practice[5]	676	22	3.3	830	69	8.3	120	15	12.5	12	2	16.7	13	1	7.7
Operations Research[4]				78	6	7.7	198	23	11.6	20	5	25.0	27	1	3.7
Mathematics, General[6]	1,508	174	11.5	502	55	11.0	421	54	12.8	86	8	9.3	79	12	15.2
Mathematics, Other	2,189	209	7.5	251	41	16.3	177	31	17.5	48	13	27.1	54	8	23.5

[1] Specified as "Analysis" through FY 1967, "Functional Analysis" was added in FY 1968.
[2] "Math Statistics" was removed from the specification in 1968, but it was added again in 1971.
[3] This specification was dropped in 1966.
[4] Added in 1976.
[5] Added in 1960.
[6] Subfields were not specified until FY 1958. Except for a few cases in earlier years all doctorates were included in the "general" classification of their respective fields.

FIELD: Mathematical Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1984 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1985

TABLE 6-41

NUMBER OF Ph.D. RECIPIENTS IN THE MATHEMATICAL SCIENCES BY TYPE OF CITIZENSHIP, 1960-1984

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	291	233	55	11	44	3
1961	332	272	51	7	44	9
1962	388	312	72	7	65	4
1963	483	401	72	11	61	10
1964	588	489	89	9	80	10
1965	685	578	92	16	76	15
1966	769	634	119	22	97	16
1967	830	692	119	27	92	19
1968	970	798	154	42	112	18
1969	1,065	887	183	49	114	15
1970	1,224	1,018	191	57	134	15
1971	1,238	1,012	214	62	152	12
1972	1,281	1,030	234	65	169	17
1973	1,232	951	254	81	173	27
1974	1,208	873	295	71	224	40
1975	1,147	848	272	75	197	27
1976	1,003	748	238	55	183	17
1977	959	710	224	54	170	25
1978	959	704	233	52	181	22
1979	977	712	244	63	181	21
1980	963	676	258	76	182	29
1981	960	648	289	63	226	23
1982	720	458	233	41	192	29
1983	701	411	255	46	209	35
1984	699	407	277	45	232	15

SOURCE: "Report on the 1984 Survey of New Doctorates," by Donald C. Rung, The American Mathematical Society Notices, Vol. 31, No. 7, Nov. 1984

TABLE 6-42

SEX, MINORITY GROUP, AND CITIZENSHIP OF NEW DOCTORATES IN THE MATHEMATICAL SCIENCES, July 1, 1983 - June 30, 1984

U.S. DEGREES	MEN					WOMEN					TOTAL
	CITIZENSHIP					CITIZENSHIP					
RACIAL/ETHNIC GROUP	U.S.	Canada	Other	Not Known	Total Men	U.S.	Canada	Other	Not Known	Total Women	
Asian, Pacific Islander	15	1	118	3	137	10		14		24	161
Black	3		3		6						6
Am. Indian, Eskimo, Aleut											
Mexican American, Chicano, Puerto Rican	5		3		8						8
None of those above	313	7	135	1	456	71		20		91	547
Unknown	10		6	1	17	4				4	21

FIELD: Computer Sciences

SOURCE: Earned Degrees Conferred Series, 1964-65 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-43

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1964-65 - 1982-83

YEAR	BACHELOR'S			MASTER's		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1964-65 thru 1969-70	3,334	416	12.5	3,852	287	7.5
1970-71	1,624	236	14.5	1,588	164	10.3
1971-72	3,402	461	13.5	1,977	225	11.4
1972-73	4,305	640	14.9	2,113	225	10.6
1973-74	4,757	780	16.4	2,276	293	12.8
1974-75	5,039	956	18.9	2,299	388	14.7
1975-76	5,664	1,124	19.8	2,603	377	14.5
1976-77	6,407	1,531	23.9	2,798	466	16.7
1977-78	7,224	1,864	25.8	3,038	567	18.7
1978-79	8,769	2,463	28.1	3,055	575	18.8
1979-80	11,213	3,399	30.3	3,647	764	20.9
1980-81	15,121	4,919	32.5	4,218	971	23.0
1981-82	20,267	7,049	34.8	4,935	1,310	26.5
1982-83	24,506	8,903	36.3	5,321	1,508	28.3
TOTAL	121,632	34,741	28.6	43,720	8,070	18.5

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1982-83, U.S. Office of Education (NCES)

TABLE 6-44

DOCTORAL DEGREES BY SEX, 1964-65 - 1982-83

	Total Both Sexes	Women Only	% Women
1964-65 thru 1969-70	269	6	2.2
1970-71	128	3	2.3
1971-72	167	12	7.2
1972-73	196	15	7.7
1973-74	198	9	4.5
1974-75	213	14	6.6
1975-76	244	23	9.4
1976-77	216	19	8.8
1977-78	196	15	7.7
1978-79	209	27	12.9
1979-80	240	27	11.3
1980-81	252	25	9.9
1981-82	251	21	8.4
1982-83	262	34	13.0
TOTAL	3,041	250	8.2

FIELD: Mathematics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-45

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S*			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	75,934	22,122	29.1	12,483	2,470	19.8
1960-61 thru 1969-70	199,682	68,253	34.2	39,445	9,390	23.8
1970-71	24,701	9,439	38.2	4,706	1,425	30.3
1971-72	23,680	9,276	39.2	4,793	1,467	30.6
1972-73	23,003	9,264	40.3	4,603	1,409	30.6
1973-74	21,556	8,845	41.0	4,387	1,392	31.7
1974-75	18,133	7,632	42.1	3,893	1,319	33.9
1975-76	15,787	6,462	40.9	3,392	1,202	35.4
1976-77	13,906	5,767	41.5	3,222	1,169	36.3
1977-78	12,428	5,139	41.4	2,876	1,016	35.3
1978-79	11,901	4,958	41.7	3,046	1,057	34.7
1979-80	11,226	4,744	42.3	2,373	903	38.1
1980-81	10,852	4,641	42.8	2,100	731	34.8
1981-82	11,341	4,900	43.2	2,248	761	33.9
1982-83	12,180	5,325	43.7	2,378	813	34.2
TOTAL	486,310	176,767	36.4	95,945	26,524	27.7

* Includes Statistics until 1955-56.

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 6-46

DOCTORAL DEGREES BY SEX, 1920-1984

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	4,213	368	8.7
FY 1960 thru FY 1969	6,401	364	5.7
FY 1970 thru FY 1972	3,739	269	7.2
FY 1973	1,222	119	9.7
FY 1974	1,196	115	9.6
FY 1975	1,149	110	9.6
FY 1976	1,003	113	11.3
FY 1977	959	128	13.3
FY 1978	838	120	14.3
FY 1979	768	118	15.4
FY 1980	745	95	12.8
FY 1981	728	112	15.4
FY 1982	720	96	13.3
FY 1983	701	113	16.1
FY 1984	699	115	16.5
TOTAL	25,081	2,355	9.4

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Statistics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 6-47

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER's		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thrut 1959-60	344	78	22.7	506	56	11.1
1960-61 thru 1969-70	2,356	377	16.0	3,507	513	14.6
1970-71	217	55	25.3	495	99	20.0
1971-72	168	47	27.9	416	85	20.4
1972-73	198	69	34.8	402	91	22.6
1973-74	257	94	36.6	453	108	23.8
1974-75	213	68	31.9	447	109	24.1
1975-76	258	92	35.7	471	111	23.6
1976-77	290	126	43.4	473	130	27.5
1977-78	273	107	39.2	507	134	26.4
1978-79	214	82	38.3	532	152	28.6
1979-80	247	104	42.1	496	133	26.9
1980-81	226	95	42.0	467	144	30.8
1981-82	258	106	41.1	479	145	30.3
1982-83	273	133	48.7	459	166	36.2
TOTAL	5,791	1,616	27.9	10,111	2,176	21.5

† Data begins for 1955-56 when identified as a separate field.

FIELD: Statistics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1981-83, U.S. Office of Education (NCES)

TABLE 6-48

DOCTORAL DEGREES BY SEX, 1955-56 - 1981-83

YEAR	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
1955-56 thru 1959-60	170	6	3.5
1960-61 thru 1969-70	965	71	7.4
1970-71	195	12	6.2
1971-72	173	12	6.9
1972-73	156	17	10.9
1973-74	147	10	6.8
1974-75	151	16	10.6
1975-76	141	16	11.3
1976-77	142	23	16.2
1977-78	153	32	20.9
1978-79	142	30	21.1
1979-80	115	24	20.9
1980-81	144	22	15.3
1981-82	125	25	20.0
1982-83	128	17	13.3
TOTAL	3,044	333	10.9

FIELD: Mathematics

SOURCE: The American Mathematical Society NOTICES, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 29, No. 7, Issue 221, November 1982; Vol. 31, No. 7, November 1984

TABLE 6-49

NUMBER AND PERCENT OF DOCTORAL FACULTY IN DOCTORATE GRANTING DEPARTMENTS BY SEX, RANK, TYPE OF INSTITUTION AND TENURE, 1978-79, 1982-83 AND 1984-85

TYPE OF INSTITUTION	DOCTORAL DEGREE RANK	1978 - 1979						1982 - 1983						1984 - 1985					
		No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty		
		Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W
Doctorate Granting Departments Group I	Instructor	71	5	7.0	2	0	0.0	94	11	11.7	2	0	0.0	39	5	12.8	3	2	66.7
	Ass't. Prof.	149	14	9.4	3	1	33.3	195	16	8.2	4	0	0.0	182	17	9.3	3	0	0.0
	Assoc. Prof.	142	7	4.9	131	7	5.3	168	9	5.4	160	9	5.6	184	11	6.0	169	11	6.5
	Professor	535	10	1.9	534	10	1.9	731	20	2.7	731	20	2.7	886	28	3.2	885	28	3.2
Doctorate Granting Departments Group II	Instructor	74	9	12.2	2	0	0.0	37	9	24.3	0	0	0.0	55	8	14.5	3	0	0.0
	Ass't. Prof.	244	20	8.2	9	2	22.2	240	27	11.3	17	4	23.5	249	33	13.3	14	3	21.4
	Assoc. Prof.	333	14	4.2	321	13	4.0	344	22	6.4	327	18	5.5	350	22	6.3	335	20	6.0
	Professor	446	13	2.9	444	13	2.9	491	12	2.4	491	12	2.4	632	18	2.8	629	18	2.9
Doctorate Granting Departments Group III	Instructor	39	4	10.3	1	1	100.0	19	1	5.3	0	0	0.0	25	7	28.2	0	0	0.0
	Ass't. Prof.	415	46	11.1	60	4	6.7	259	28	10.8	23	2	8.7	314	40	12.7	28	5	17.9
	Assoc. Prof.	664	26	3.9	633	23	3.6	346	19	5.5	303	16	5.3	391	23	5.9	352	20	5.7
	Professor	719	21	2.9	712	21	2.9	456	10	2.2	437	10	2.3	564	11	2.0	558	11	2.0
Doctorate Granting Departments Group IV	Instructor	19	2	10.5	1	0	0.0	4	3	75.0	1	1	100.0	4	2	50.0	1	1	100.0
	Ass't. Prof.	6	1	16.7	2	1	50.0	151	23	15.2	5	1	20.0	152	27	17.8	1	0	0.0
	Assoc. Prof.	4	1	25.0	3	1	33.3	106	9	8.5	75	5	6.7	126	12	9.5	91	8	8.8
	Professor	4	0	0.0	4	0	0.0	267	10	3.8	261	10	3.8	296	13	4.4	286	12	4.2
Doctorate Granting Departments Group V	Instructor	18	2	11.1	1	1	100.0	1	1	100.0	0	0	0.0	6	2	33.3	0	0	0.0
	Ass't. Prof.	2	0	0.0	1	0	0.0	26	3	11.5	0	0	0.0	42	0	0.0	0	0	0.0
	Assoc. Prof.	2	1	50.0	1	0	0.0	17	1	5.9	13	1	7.7	28	0	0.0	22	0	0.0
	Professor	6	0	0.0	5	0	0.0	49	1	2.0	47	1	2.1	107	4	3.7	106	4	3.8
Doctorate Granting Departments Group VI	Instructor	11	2	18.2	0	0	0.0	4	2	50.0	0	0	0.0	0	0	0.0	0	0	0.0
	Ass't. Prof.	23	9	39.1	18	9	50.0	44	8	18.9	16	4	25.0	33	3	9.1	6	0	0.0
	Assoc. Prof.	24	2	8.3	22	2	9.1	138	5	3.6	137	5	3.7	103	6	5.8	101	5	5.0
	Professor	10	0	0.0	10	0	0.0	150	1	0.7	150	1	0.7	151	3	2.0	151	3	2.0
All Doctorate Granting Departments	Instructor	232	24	10.3	7	2	28.6	159	27	17.0	3	1	33.3	129	24	18.6	7	3	42.9
	Ass't. Prof.	839	90	10.7	98	17	17.3	915	105	11.5	65	11	16.9	972	120	12.3	52	8	15.4
	Assoc. Prof.	1,169	51	4.4	1,111	45	4.1	1,119	65	5.8	1,015	54	5.3	1,182	74	6.3	1,070	64	6.0
	Professor	1,720	44	2.6	1,709	44	2.6	2,144	54	2.5	2,117	54	2.6	2,636	77	2.9	2,615	76	2.9
All Doctorate Departments All Ranks		3,960	209	5.3	2,925	108	3.7	4337	251	5.8	3,200	111	3.5	4,919	295	6.0	3,744	151	4.0

*Numbers reported are totals for institutions responding to the survey and do not represent total faculty.

FIELD: Mathematics

SOURCE: The American Mathematical Society NOTICES, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 29, No. 7, Issue 221, November 1982; Vol. 31, No. 7, November 1984

TABLE 6-50

NUMBER AND PERCENT OF DOCTORAL FACULTY IN NON-DOCTORATE GRANTING DEPARTMENTS BY SEX, RANK, TYPE OF INSTITUTION AND TENURE, 1978-79, 1982-83 AND 1984-85*

TYPE OF INSTITUTION	DOCTORAL DEGREE RANK	1978 - 1979						1982 - 1983						1984 - 1985					
		No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty		
		Total	#	% #	Total	#	% #	Total	#	% #	Total	#	% #	Total	#	% #	Total	#	% #
MASTER'S DEGREE	Instructor	227	110	48.6	42	16	38.1	220	125	56.8	20	11	55.0	345	207	60.0	31	15	48.4
Without Doctorate	Ass't. Prof.	300	68	22.7	277	59	21.3	210	53	25.2	173	36	20.8	185	46	24.9	135	37	24.4
	Assoc. Prof.	221	27	12.2	219	27	12.3	124	24	18.6	127	24	18.9	137	17	12.4	133	17	12.8
	Professor	60	4	6.7	60	4	6.7	52	4	12.5	32	4	12.5	26	2	7.7	26	2	7.7
With Doctorate	Instructor	34	9	26.5	0	0	0.0	37	4	14.8	1	0	0.0	65	11	16.9	12	2	16.7
	Ass't. Prof.	553	69	12.5	139	14	10.1	439	81	18.5	69	14	20.3	537	82	15.3	67	12	17.9
	Assoc. Prof.	889	59	6.6	816	393	6.5	680	69	10.1	594	60	10.1	755	88	11.7	645	74	11.5
	Professor	706	41	5.8	699	40	5.7	712	49	6.9	696	45	6.5	920	55	6.0	906	55	6.1
BACHELOR'S DEGREE																			
Without Doctorate	Instructor	182	73	40.1	16	8	50.0	265	140	52.8	8	5	37.5	338	178	52.7	6	1	16.7
	Ass't. Prof.	251	65	25.9	154	32	20.8	206	61	29.6	98	29	29.6	271	70	25.8	69	18	26.5
	Assoc. Prof.	230	30	13.0	216	28	13.0	165	22	13.3	192	22	14.5	164	20	12.2	145	14	9.7
	Professor	70	8	11.4	67	8	11.9	53	5	9.4	51	5	9.8	51	7	13.7	50	7	14.0
With Doctorate	Instructor	19	6	31.6	1	0	0.0	19	2	10.5	3	0	0.0	18	5	27.8	2	0	0.0
	Ass't. Prof.	438	55	12.6	76	6	7.9	381	77	20.2	53	5	9.4	458	114	24.9	59	10	16.9
	Assoc. Prof.	505	55	10.9	428	45	10.5	435	39	9.0	395	22	6.6	557	59	11.0	425	41	9.6
	Professor	432	36	8.3	411	36	8.8	440	43	9.8	422	41	9.7	515	44	8.5	489	42	8.6
ALL INSTITUTIONS**																			
Without Doctorate		1,861	475	25.5	1,247	235	18.7	1,580	592	34.9	773	161	20.8	1,805	682	37.8	715	132	18.5
With Doctorate		6,993	599	8.7	6,534	325	4.9	7,470	615	8.2	5,373	307	5.7	8,724	753	8.6	6,349	385	6.1
TOTAL		10,854	1,074	9.9	7,781	556	7.1	9,050	1,167	12.9	6,146	468	7.6	10,527	1,435	13.6	7,064	517	7.3

* Number of institutions reporting varies from year to year in all types of institutions. Numbers reported do not represent total faculty.

**Includes information on doctorate granting institutions shown in preceding Table.

FIELD: Mathematics

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 6-51

MATHEMATICIANS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	Total		Math & Science Teachers*		ALL OTHER					
					Math Scientists		Statisticians		Actuaries	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	63,617	100.00	16,697	100.00	6,401	100.00	30,200	100.00	10,319	100.00
MALES	39,944	62.79	11,390	68.22	5,188	81.05	15,684	51.93	7,682	74.45
White*	35,571	55.91	10,004	59.91	4,576	71.49	13,711	45.40	7,280	70.55
Black*	1,621	2.55	496	2.97	248	3.87	786	2.60	91	0.88
Indian/Alaskan Native*	124	0.19	58	0.35	25	0.39	41	0.14	0	0.00
Asian/Pacific Isl.*	1,699	2.67	507	3.04	200	3.12	733	2.43	259	2.51
Other Race*	42	0.07	14	0.08	7	0.11	15	0.05	6	0.06
Hispanic	847	1.33	311	1.86	132	2.06	398	1.32	46	0.45
FEMALES	23,673	37.21	5,307	31.78	1,213	18.95	14,516	48.07	2,637	25.55
White*	19,868	31.23	4,555	27.28	959	14.98	11,917	39.46	2,437	23.62
Black*	2,306	3.62	438	2.62	179	2.80	1,595	5.28	94	0.91
Indian/Alaskan Native*	64	0.10	7	0.04	0	0.00	57	0.19	0	0.00
Asian/Pacific Isl.*	856	1.35	221	1.32	60	0.94	497	1.65	78	0.76
Other Race*	16	0.03	5	0.03	0	0.00	11	0.04	0	0.00
Hispanic	563	0.88	81	0.49	15	0.23	439	1.45	28	0.27

* Non-Hispanic

SOURCE: Projections of Educational Statistics to 1988-89, and Earned Degrees Conferred Series 1970 thru 1983, National Center for Education Statistics

TABLE 6-52

DEGREES IN MATHEMATICS/STATISTICS AND COMPUTER SCIENCES 1970-1983
PROJECTED TO 1989

	Bachelor's Degrees				Master's Degrees				Ph.D.s			
	Math & Statistics		Computer Science		Math & Statistics		Computer Science		Math & Statistics		Computer Science	
Year	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
1970	27,442	37.4	1,544	12.9	5,636	29.6	1,459	9.3	1,236	7.8	107	1.9
1971	24,801	38.0	1,624	14.5	5,191	29.2	1,588	10.3	1,199	7.8	128	2.3
1972	23,713	39.0	3,402	13.5	5,198	29.7	1,977	11.4	1,128	7.9	167	7.2
1973	23,067	40.2	4,305	14.9	5,028	29.9	2,113	10.6	1,068	9.6	196	7.7
1974	21,635	40.9	4,757	16.4	4,834	31.0	2,276	12.9	1,031	9.7	198	4.5
1975	18,181	41.8	5,039	18.9	4,327	32.9	2,299	14.7	975	11.3	213	6.6
1976	15,984	40.7	5,664	19.8	3,857	34.0	2,603	14.5	856	11.0	244	9.4
1977	14,196	41.5	6,407	23.9	3,695	35.2	2,798	16.7	823	13.2	216	8.8
1978	12,569	41.4	7,224	25.8	3,373	33.9	3,038	18.7	805	15.4	196	7.7
1979	12,115	41.6	8,769	28.1	3,578	33.8	3,055	18.8	933	16.6	209	12.9
1980	11,473	42.3	11,213	30.3	2,868	36.1	3,647	20.9	724	13.8	240	11.3
1981	11,078	42.8	15,121	32.5	2,567	34.1	4,218	23.0	728	15.7	252	9.9
1982	11,599	43.2	20,267	34.8	2,727	33.9	4,935	26.5	681	13.8	251	8.4
1983	12,453	43.8	24,510	36.3	2,837	34.5	5,321	28.3	698	16.6	262	13.0
	Projected											
1982	7,940	38.8	9,130	26.4	2,550	36.5	3,840	23.4	650	18.5	180	11.1
1983	7,960	39.2	9,660	25.4	2,550	36.1	4,050	23.7	630	17.5	180	11.1
1984	7,940	39.8	9,810	25.1	2,550	35.7	4,180	22.7	620	17.7	180	11.1
1985	7,900	40.4	9,830	26.9	2,560	35.2	4,340	21.7	610	18.0	170	11.8
1986	8,020	42.3	9,800	28.0	2,540	35.4	4,320	21.8	600	18.3	170	11.8
1987	8,000	43.3	9,780	28.7	2,530	35.6	4,280	21.7	580	17.2	170	11.8
1988	8,100	44.7	9,940	29.3	2,460	34.6	4,200	21.2	570	17.5	160	12.5
1989	8,180	45.7	10,110	29.0	2,420	34.3	4,140	21.0	550	16.4	160	12.5

FIELD: Mathematics, Statistics and Computer Specialties

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 6-53

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN MATHEMATICS, STATISTICS AND COMPUTER SPECIALTIES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, September 30, 1984

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	%A	No.	%I	No.	% W
Actuary	133	27	20.3	14	10.5	4	3.0	6	4.5	5	3.8	3	2.3	0	0.0	119	89.5
Operations Research	3,825	552	14.4	367	93.6	81	2.1	165	4.3	87	2.3	100	2.6	15	0.4	3,456	90.5
Mathematics	3,528	896	25.4	459	12.9	159	4.5	244	6.9	95	2.7	103	2.6	12	0.3	3,074	87.1
Mathematics Technician	182	106	58.2	22	12.1	7	3.8	12	6.6	6	3.3	4	2.2	0	0.0	160	87.9
Mathematics Statistician	993	240	24.2	114	14.5	51	5.1	58	5.8	15	1.5	69	6.9	2	0.2	849	85.5
Statistican	2,729	860	31.5	436	16.0	230	8.4	292	10.7	65	2.4	72	2.6	7	0.3	2,291	84.0
Statistical Assistant	44	31	70.5	15	34.1	14	31.8	14	31.8	1	2.3	0	0.0	0	0.0	29	65.9
Statistical Ass't (Clerical)	1,537	1,359	88.4	580	37.7	500	32.5	494	32.1	42	2.7	32	2.1	12	0.8	957	62.3
Digital Computer Sys. Admin.																	
Computer Science	1,361	386	28.4	165	12.1	70	5.1	71	5.2	16	1.2	74	5.4	4	0.3	1,196	87.9
Computer Operation	10,348	4,919	47.5	3,724	36.0	1,978	19.1	2,813	27.2	515	5.0	283	2.7	111	1.1	6,624	64.0
Computer Specialist	36,408	10,477	29.9	5,738	15.8	2,378	6.5	3,898	10.7	800	2.2	850	2.3	190	0.5	20,670	84.2

FIELD: Mathematical Sciences

SOURCE: "Report on the 1984 Survey of New Doctorates," by Donald C. Rung. The American Mathematical Society Notices, Vol. 31, No. 7

TABLE 6-54

U.S. CITIZEN DOCTORATES IN THE MATHEMATICAL SCIENCES BY SEX, 1972-73 - 1983-84

YEAR	ADJUSTED TOTAL*	U. S. CITIZENS				
		TOTAL	%	MEN	WOMEN	% W
1972-73	986	774	78.5	696	78	10.1
1973-74	938	677	72.2	618	59	8.7
1974-75	999	741	74.2	658	83	11.2
1975-76	965	722	74.	636	86	11.9
1976-77	901	689	76.5	602	87	12.6
1977-78	868	634	73.0	545	89	14.0
1978-79	806	596	73.9	503	93	15.6
1979-80	791	578	73.1	491	87	15.1
1980-81	839	567	67.6	465	102	18.0
1981-82	798	519	65.0	431	88	17.0
1982-83†	744	455	61.2	366	89	19.6
1983-84	738	433	58.7	346	87	20.1

*Includes only those for whom citizenship is known.

†Does not include Computer Science degrees.

CHAPTER 7

ENGINEERING, TECHNOLOGY AND TECHNICIANS

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FIELD: Engineering

SOURCE: Estimates derived from tables throughout Professional Women and Minorities - Summary Table

TABLE 7-1

PROPORTION OF WOMEN AND MINORITIES IN ENGINEERING POPULATIONS

	Women		Blacks		Hispanic		American Indian		Asian		Foreign Nationals		White, Non-Hispanic U.S. Males	
Enrollments (Fall of)	1969	1984	1969	1984	1973	1984	1973	1984	1973	1984	1973	1984	1973	1984
First Year	1.6	16.5	1.3	5.9	2.9	4.6	0.1	0.4	1.7	5.3	NA	4.6	86.5	62.7
Undergraduate Total Full Time	1.3	15.6	1.2	4.4	3.2	4.0	0.2	0.3	2.0	6.0	NA	6.3	88.4	63.1
Graduate Total Full Time	2.1	11.8	0.2	1.4	0.8	1.3	0.1	0.1	2.5	5.7	27.6	35.4	65.4	44.3
DEGREES	**1960-76**	**1984**	**1969-77**	**1984**	**1973-77**	**1984**	**1973-77**	**1984**	**1973-77**	**1984**	**1973-77**	**1984**	**1973-77**	**1984**
bachelor's	1.2	14.0	1.5	2.6	2.5	2.6	0.1	0.1	2.4	4.7	6.6	7.6	86.7	68.3
Master's	1.4	10.1	0.6	1.2	1.1	1.7	0.05	0.1	3.2	6.4	20.4	27.0	74.6	53.5
Doctorate	1.0	4.5	0.3	0.7	0.6	0.8	0.03	0.0	4.0	8.3	30.9	38.7	64.2	46.8
General Workforce	**1960**	**1985**	**1970**	**1985**	**1970**	**1985**	**1970**	**1982**	**1970**	**1982**			**1970**	**1985**
	0.8	7.0	1.0	2.6	1.4	2.8	0.03	0.5	1.5	4.7			96.1	82.0
Academic Workforce	**1972**	**1985**		**1985**		**1985**		**1980**		**1980**				**1980**
	0.4	4.3	3.4	1.1	2.0	0.0		0.4		4.8				88.6
Federal Workforce	**1974**	**1984**	**1974**	**1984**	**1974**	**1984**	**1974**	**1984**	**1974**	**1984**			**1974**	**1984**
	0.6	4.3	1.7	2.6	1.0	2.0	0.2	0.4	1.3	5.5			95.8	88.8
Doctoral Population	**1973**	**1983**	**1973**	**1983**	**1973**	**1983**	**1973**	**1983**	**1973**	**1983**		**1983**	**1973**	**1983**
	0.4	1.8	0.3	0.7	0.4	1.5	0.1	0.1	9.2	17.0		10.3	89.6	68.6

See also sections on Enrollments, Degrees, General Workforce and Academic Workforce.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 7-2

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920–FY1972			FY1973–FY1977			FY1978–FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Engineering Subtotal	37,709	164	0.4	14,921	256	1.7	12,568	429	3.4	2,780	124	4.5	2,915	152	5.2
Aerospace, Aeronautical & Astron.[1]	1,827	13	0.7	696	10	1.4	447	3	0.7	106	2	1.9	119	2	1.7
Agricultural	588	0	0.0	257	2	0.8	287	5	1.7	58	1	1.7	74	1	1.4
Bioengineering, & Biomedical[2]	230	0	0.0	356	9	2.5	338	13	3.9	73	8	10.9	71	10	14.1
Civil	3,433	11	0.3	1,561	24	1.5	1,306	32	2.5	354	12	33.4	351	19	5.4
Chemical	6,002	27	0.4	1,802	32	1.8	1,435	55	3.8	349	22	6.3	361	25	6.9
Ceramic	552	5	0.9	126	6	4.8	116	5	4.3	24	3	12.5	25	2	8.0
Communications[3]										25	0		11	0	0.0
Engineering Science[4]										30	1	3.3	28	0	0.0
Environmental Health Engineering[5]										43	1	2.3	57	6	10.5
Electrical, Electronics[6]	7,389	22	0.3	2,783	34	1.2	2,146	60	2.8				593	14	2.4
Electronics Engineering[6]	1,419	7	0.5	436	4	0.9	73	15	20.6	517	7	1.4			
Industrial[6]	914	7	0.8	434	12	2.8	356	27	7.6	86	6	7.0	85	16	18.8
Nuclear[6]	473	2	0.4	569	9	1.6	564	21	3.7	103	5	4.9	120	6	5.0
Engineering Mechanics[6]	952	1	0.1	714	12	1.7	452	11	2.4	68	2	2.9	91	9	9.9
Engineering Physics[6]	1,689	10	0.6	118	2	1.7	84	3	3.6	10	0	0.0	8	0	0.0
Mechanical	4,279	6	0.1	1,638	14	0.9	1,471	27	1.8	311	6	1.9	336	6	1.8
Metallurgical[6]	2,991	15	0.5	602	7	1.2	479	17	3.6	87	5	5.7	78	7	9.0
Naval Arch., Marine Engineering[3]										4	0	0.0	5	0	0.0
Ocean[3]										12	0	0.0	11	0	0.0
Polymer[3]										21	1	4.8	31	2	6.5
Sanitary & Environmental Eng.[7]	596	2	0.3	216	3	1.4	330	18	5.5						
Mining & Mineral	51	0	0.0	29	0	0.0	30	1	3.3	22	1	4.5	16	0	0.0
Materials Science[8]	197	0	0.0	630	21	3.3	652	39	6.0	157	22	14.0	168	17	10.1
Operations Research[9,10]	0	0	0.	477	11	2.3	321	24	7.5	44	5	11.4	50	0	0.0
Petroleum[10,11]	0	0	0.0	126	7	5.6	122	3	2.5	22	0	0.0	17	2	0.0
Computer[12]	0	0	0.0	342	24	7.0	360	24	6.7	83	6	7.2	56	1	1.8
Systems[13]	0	0	0.0	165	2	1.2	316	15	4.8	57	3	5.3	52	1	1.9
Engineering, General	283	1	0.3	194	3	1.5	188	10	5.3	30	1	3.3	29	0	0.0
Engineering, Other	3,138	27	0.7	852	18	2.1	386	11	2.9	84	4	4.8	72	8	11.1

[1] Originally specified as "Aeronautical". In 1966, "Astronautical" was added. In 1984 "Aerospace" was added. [2] Added in 1968. [3] Added in 1983. Combined in 1984. [4] Combined in 1983. [5] In 1960, "Nuclear Engineering" was dropped and previous cases were added to "Engineering Physics". It was added again as a separate field in 1968. [6] Originally specified as "Metallurgy & Met. Eng." Added "Phys." in 1966, renamed in 1983. [7] "Environmental" added in 1977. [8] Dropped in 1983. [9] Dropped in 1960. Previous cases were added to "Engineering Other". [10] Added in 1971. [11] Fuel Technology & Petroleum added in 1973. Combined in 1984. [12] Added in 1975. [13] Systems Design/systems science added in 1979. Combined in 1984. Subfields were not specified until FY 1958. Except for afew cases in earlier years, all doctorates were included in the "General" classification of their respective fields.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 7-3

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF ENGINEERING AND SEX

FIELD	CY 1920-FY 1959*	FY 1960-FY 1969	FY 1970-74	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	TOTAL 1920-1984
Aeronautical														
Total	298	948	899	141	122	115	105	81	81	97	85	106	119	3,195
Women	2	6	8	2	0	3	1	0	1	0	1	2	2	30
% Women	0.67	0.63	0.89	1.42		2.61	0.97		1.23		1.18	1.19	1.68	0.94
Chemical														
Total	1,811	2,971	2,032	370	314	306	261	287	285	296	306	349	361	9,949
Women	3	17	19	4	7	9	5	8	14	11	17	22	25	161
% Women	0.17	0.57	0.94	1.08	2.23	2.94	1.91	2.79	4.91	3.72	5.56	6.30	6.93	1.62
Civil														
Total	464	1,919	1,739	290	314	268	236	236	239	287	308	354	361	7,282
Women	1	7	13	3	4	7	6	2	6	6	12	12	19	98
% Women	0.22	0.36	0.75	1.03	1.27	2.61	2.54	0.85	2.51	2.09	3.90	3.39	5.41	1.35
Electrical														
Total	1,511	3,934	3,418	536	512	461	410	451	405	411	1,469	517	593	15,428
Women	3	11	17	9	7	9	11	7	11	14	17	7	14	137
% Women	0.23	0.28	0.50	1.68	1.36	1.95	2.68	1.55	2.72	3.41	3.62	1.35	2.36	1.02
Industrial														
Total	70	452	594	92	67	73	51	83	77	130	79	86	85	1,936
Women	0	4	6	2	2	5	2	6	7	6	6	6	16	68
% Women		0.88	1.00	2.17	2.98	6.84	3.92	7.23	9.09	4.62	7.59	6.98	18.82	3.51
Mechanical														
Total	791	2,282	1,945	325	304	270	281	282	293	282	333	311	336	8,034
Women	1	2	9	2	3	3	2	4	4	5	12	6	6	60
% Women	0.13	0.09	0.46	0.62	0.98	1.11	0.71	1.42	1.37	1.77	3.60	1.93	1.79	0.73
Metallurgical														
Total	943	1,441	888	118	111	92	98	87	107	99	88	87	78	4,150
Women	4	7	8	0	2	1	2	0	7	5	3	5	7	51
% Women	0.42	0.49	0.90		1.80	1.08	2.04		6.54	5.05	3.41	5.75	8.97	1.23
Mining†														
Total	0	10	56	6	6	2	7	4	4	8	7	22	16	148
Women	0	0	0	0	0	0	0	0	0	0	1	1	0	2
% Women											14.29	4.55	0.00	1.35

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.
†Not identified as a separate field until 1968.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 7-4

DOCTORAL DEGREES BY SEX, 1920-1984

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	8,265	35	0.4
FY 1960 thru FY 1969	19,042	77	0.4
FY 1970 thru FY 1972	110,402	52	0.5
FY 1973	3,338	45	1.3
FY 1974	3,144	34	1.1
FY 1975	2,959	50	1.7
FY 1976	2,791	53	1.9
FY 1977	2,641	74	2.8
FY 1978	2,423	53	2.2
FY 1979	2,494	63	2.5
FY 1980	2,479	90	3.6
FY 1981	2,528	99	3.9
FY 1982	2,644	124	4.7
FY 1983	2,780	124	4.5
FY 1984	2,915	152	5.2
TOTAL	70,845	1,125	1.6

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Engineering

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1984 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1985

TABLE 7-5

NUMBER OF Ph.D. RECIPIENTS IN ENGINEERING BY TYPE OF CITIZENSHIP, 1960-1984

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	794	607	183	54	129	4
1961	940	732	202	48	154	6
1962	1,216	949	259	41	218	8
1963	1,357	1,062	280	65	215	15
1964	1,664	1,313	331	84	247	20
1965	2,074	1,603	430	111	319	41
1966	2,301	1,718	501	116	385	82
1967	2,604	1,957	607	198	409	40
1968	2,848	2,134	680	244	436	34
1969	3,251	2,416	780	320	460	55
1970	3,433	2,542	872	401	471	19
1971	3,500	2,436	1,032	513	519	32
1972	3,476	2,307	1,137	619	518	32
1973	3,339	2,126	1,170	552	618	43
1974	3,121	1,735	1,308	607	701	178
1975	2,961	1,685	1,223	413	810	53
1976	2,791	1,532	1,183	384	799	76
1977	2,641	1,468	1,098	325	773	75
1978	2,423	1,259	1,092	325	767	72
1979	2,494	1,294	1,138	322	816	62
1980	2,479	1,254	1,148	298	850	77
1981	2,528	1,168	1,241	298	943	119
1982	2,644	1,165	1,324	296	1,028	155
1983	2,780	1,154	1,488	319	1,169	138
1984	2,915	1,239	1,542	274	1,268	134

FIELD: Engineering

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 7-6

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER's		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	435,534	1,356	0.3	63,909	219	0.3
1960-61 thru 1969-70	372,020	1,880	0.5	123,075	716	0.6
1970-71	44,898	358	0.8	16,323	185	1.1
1971-72	45,693	492	1.1	16,729	271	1.6
1972-73	46,759	576	1.2	16,510	276	1.7
1973-74	43,237	697	1.6	15,176	347	2.3
1974-75	39,806	845	2.1	15,138	371	2.5
1975-76	38,774	1,317	3.4	16,021	568	3.6
1976-77	40,936	2,022	4.9	15,961	697	4.4
1977-78	47,222	3,479	7.4	16,049	840	5.2
1978-79	53,445	4,880	9.1	15,242	934	6.1
1979-80	58,774	5,948	10.1	15,911	1,122	7.1
1980-81	63,287	7,024	11.1	16,386	1,323	8.1
1981-82	67,021	8,231	12.3	17,526	1,573	9.0
1982-83	72,248	9,601	13.3	18,830	1,746	9.3
TOTAL	1,469,654	48,706	3.3	398,786	11,188	2.8

FIELD: Engineering Technology

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1982-83, U.S. Office of Education (NCES)

TABLE 7-7

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	5,148	42	0.8	134	0	0.0
1971-72	5,772	46	0.8	237	1	0.4
1972-73	4,854	52	1.1	122	2	1.6
1973-74	7,456	105	1.4	209	9	4.3
1974-75	7,497	192	2.6	221	4	1.8
1975-76	7,943	165	2.1	328	14	4.3
1976-77	8,347	196	2.3	284	23	8.1
1977-78	8,787	246	2.8	360	25	6.9
1978-79	9,355	327	3.5	268	18	6.7
1979-80	10,491	490	4.7	339	20	5.9
1980-81	11,713	675	5.8	323	39	12.1
1981-82	12,984	875	6.7	413	55	13.3
1982-83	17,022	1,353	8.0	520	51	9.8
TOTAL	117,379	4,764	4.1	3,758	261	7.0

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1969 through 1984 Series, Engineering Manpower Commission

TABLE 7-8

ENGINEERING DEGREEES GRANTED TO WOMEN BY DEGREE LEVEL, 1968-69 THROUGH 1983-84

YEAR	BACHELOR'S			MASTER'S+			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69*	39,972	328	0.82	14,980	107	0.71	3,387	23	0.68
1969-70*	42,966	358	0.83	15,548	170	1.09	3,620	16	0.44
1970-71*	43,167	353	0.82	16,383	158	0.96	3,640	25	0.69
1971-72	44,190	525	1.19	17,356	299	1.76	3,774	35	0.93
1972-73	43,429	624	1.44	17,152	226	1.32	3,587	48	1.34
1973-74	41,407	744	1.80	15,885	393	2.47	3,362	36	1.07
1974-75	38,210	878	2.30	15,773	380	2.41	3,039	53	1.74
1975-76	37,970	1,376	3.62	16,506	557	3.37	2,977	56	1.88
1976-77	40,095	1,961	4.89	16,551	646	3.90	2,814	67	2.38
1977-78	46,095	3,280	7.11	16,182	814	5.03	2,573	51	1.98
1978-79	52,598	4,716	8.97	15,624	866	5.54	2,815	61	2.17
1979-80	58,742	5,680	9.67	17,243	1,092	6.33	2,751	88	3.20
1980-81	62,935	6,545	10.40	17,914	1,225	6.84	2,841	90	3.17
1981-82	66,990	8,140	12.15	18,289	1,539	8.41	2,887	126	4.36
1982-83	72,471	9,566	13.20	19,909	1,796	9.02	3,023	142	4.70
1983-84	76,931	10,761	13.99	21,226	2,146	10.12	3,234	153	4.73

+Includes Engineer Degrees

*Totals for women in these years include only numbers actually reported. The totals would be higher if all institutions had reported all categories. (Figures for later years are complete estimates.)

SOURCE: Engineering and Technology Degrees 1974 through 1984, Engineering Manpower Commission

TABLE 7-9

ENGINEERING DEGREES BY LEVEL, SEX, RACE & CITIZENSHIP, 1984

	BACHELOR'S		MASTER'S*		Ph.D.	
	Number	Percent	Number	Percent	Number	Percent
Total	**76,931**	**100.0**	**21,226**	**100.0**	**3,234**	**100.0**
Women	10,761	14.0	2,149	10.1	153	4.7
Black	2,022	2.6	257	1.2	24	0.7
Hispanic**	2,038	2.6	364	1.7	25	0.8
Asian/Pacific	3,609	4.7	1,354	6.4	267	8.3
American Indian	112	0.1	25	0.1	0	
Foreign National	5,833	7.6	5,728	27.0	1,253	38.7

*Includes Engineer Degrees **Includes 355 B.S. and 9 M.S. at U. Puerto Rico

TABLE 7-10

PERCENT OF ENGINEERING BACHELOR'S DEGREES AWARDED TO WOMEN AND MINORITIES

	1974	1976	1978	1980	1982	1984
Women	1.80	3.62	7.11	9.67	12.15	13.99
Black	1.83	2.05	1.94	2.25	2.45	2.63
Hispanics*	1.56	1.81	1.91	1.72	1.91	2.20
Asian/Pacific	2.31	2.83	2.59	3.27	3.85	4.69
American Indian	0.08	0.11	0.08	0.10	0.14	0.15
Foreign National	5.88	7.37	6.69	8.33	8.08	7.58

*Exclusive of the University of Puerto Rico

TABLE 7-11

PERCENT OF ENGINEERING DEGREES AWARDED TO FOREIGN NATIONALS

	B.S	M.S.	Ph.D
1974	5.88	19.,51	30.16
1975	6.45	20.61	29.32
1976	7.37	22.36	35.61
1977	7.47	23.11	35.36
1978	6.69	22.99	33.97
1979	7.20	25.24	33.00
1980	8.33	26.17	35.70
1981	8.93	26.11	37.10
1982	8.08	28.50	40.42
1983	8.49	25.84	39.43
1984	7.58	26.99	38.75

FIELD: Engineering
SOURCE: Earned Degrees Conferred Series, 1948-60 thru 1982-83, U. S. Office of Education (NCES)

TABLE 7-12

DEGREES AWARDED IN ENGINEERING BY SEX, LEVEL OF DEGREE AND DISCIPLINE, 1948-60 - 1982-83

	AERONAUTICAL		CHEMICAL		CIVIL		ELECTRICAL		INDUSTRIAL		MECHANICAL		METALLURG.		MINING		TOTAL†	
	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.
1948 thru 1960																		
Total	16,628	5,596	39,570	7,808	67,540	9,365	105,170	15,477	13,014	3,024	114,156	10,591	4,082	1,129	1,623	174	435,934	65,909
Women	110	18	285	52	185	29	240	35	39	6	206	25	8	7	2	0	1,336	219
% Women	.66	.50	.72	.41	.23	.31	.23	.23	.30	.20	.18	.24	.20	.62	.12	-	.31	.34
1961 thru 1970																		
Total	18,620	6,842	50,544	8,876	54,099	17,727	110,405	34,771	23,906	10,657	82,008	19,592	5,479	2,510	1,125	943	372,020	123,075
Women*	99	51*	310	94*	263	76*	407	117*	110	53*	241	46*	51	22*	2	7*	1,880	716*
% Women	.53	.48	1.01	.66	.49	.43	.37	.34	.46	.50	.29	.24	.93	.88	.18	1.29	.50	.58
1971 thru 1975																		
Total	8,745	5,001	17,510	5,340	36,959	12,971	58,528	19,360	15,935	8,668	40,734	10,367	2,687	1,380	1,115	318	220,704	79,876
Women	97	31	487	131	478	227	563	244	194	178	295	78	48	26	10	2	2,971	1,450
% Women	1.11	1.03	2.78	2.45	1.29	1.75	.96	1.26	1.22	2.05	.72	.75	1.79	1.88	.90	.63	1.35	1.82
1975-76																		
Total	1,009	479	3,203	1,031	8,039	3,000	9,874	3,774	2,241	1,751	6,841	1,907	351	176	331	70	38,774	16,021
Women	29	10	276	39	252	99	193	104	87	81	147	27	23	10	8	2	1,317	557
% Women	2.87	2.08	8.61	3.78	3.12	3.30	1.95	2.76	3.88	4.63	2.14	1.41	6.55	5.68	2.41	2.85	3.40	3.47
1976-77																		
Total	1,078	385	3,524	1,086	8,228	2,964	9,936	3,788	2,240	1,609	7,703	1,952	350	169	404	77	40,936	15,961
Women	28	8	420	65	429	129	266	134	143	75	235	49	21	5	9	4	2,022	697
% Women	2.59	2.07	11.91	5.98	5.21	4.35	2.67	3.53	6.38	4.66	3.05	2.51	6.00	3.03	2.22	5.19	4.93	4.36
1977-78																		
Total	1,186	411	4,615	1,237	9,265	2,691	11,213	3,742	2,712	1,722	8,924	1,943	420	204	509	92	47,222	16,049
Women	61	11	716	87	690	132	435	142	323	138	466	57	44	14	22	3	3,479	840
% Women	5.14	2.68	15.52	7.03	7.45	4.91	3.88	3.80	11.91	8.01	5.22	2.93	10.48	6.86	4.32	3.26	7.37	5.23
1978-79																		
Total	1,386	372	5,655	1,149	9,941	2,655	12,440	3,596	2,804	1,502	10,171	1,878	503	198	600	92	53,445	15,242
Women	66	17	1,006	114	955	143	659	143	428	128	603	67	81	13	35	3	4,880	934
% Women	4.83	4.57	17.79	9.92	9.67	5.39	5.30	3.98	15.26	8.52	5.93	3.57	16.10	6.57	5.83	3.26	9.13	6.12
1979-80																		
Total	1,424	382	6,383	1,271	10,442	2,683	13,902	3,842	3,217	1,313	11,863	2,060	585	211	682	87	69,265	16,250
Women	82	9	1,215	133	991	197	902	184	545	133	882	98	100	21	51	3	6,438	1,142
% Women	5.76	2.36	19.03	10.46	9.49	7.34	6.49	4.79	16.94	10.13	7.43	4.76	17.09	9.95	7.48	3.45	9.29	7.03
1980-81																		
Total	1,809	408	6,527	1,267	10,678	2,891	14,938	3,901	3,835	1,631	13,329	2,291	603	193	750	84	75,000	16,709
Women	129	20	1,252	163	1,121	207	1,096	201	716	166	1,136	116	116	21	61	1	7,699	1,362
% Women	7.13	4.90	19.18	12.87	10.50	7.16	7.34	5.15	19.72	10.18	8.52	5.06	19.24	10.88	8.13	1.19	10.27	8.15
1981-82																		
Total	2,120	521	6,740	1,285	10,524	2,995	16,455	4,462	3,992	1,656	13,922	2,399	592	262	662	88	92,989	18,352
Women	171	39	1,467	181	1,191	270	1,409	288	943	210	1,220	139	98	27	48	3	9,981	1,683
% Women	8.07	7.49	21.77	14.09	11.32	9.02	8.56	6.45	23.62	12.68	8.76	5.79	16.55	10.31	7.25	3.41	10.73	9.17
1982-83																		
Total	2,127	491	7,185	1,368	9,989	3,074	18,049	4,531	3,748	1,432	15,675	2,511	645	253	597	131	89,199	19,350
Women	172	37	1,616	164	1,321	294	1,774	293	987	206	1,443	149	117	29	44	10	10,951	1,797
% Women	8.09	7.54	22.49	11.99	13.22	9.56	9.83	6.47	26.33	14.39	9.21	5.93	18.14	11.46	7.37	7.63	13.28	9.29
TOTAL																		
Total	56,132	16,888	131,456	31,718	235,724	63,016	381,910	101,249	77,642	34,965	325,326	60,526	16,297	6,681	8,398	1,756	1,535,088	400,794
Women	1,044	233	9,050	1,168	7,846	1,803	7,944	1,885	4,555	1,374	6,874	851	707	195	292	38	52,974	11,408
% Women	1.96	1.38	6.68	3.68	3.33	2.86	2.08	1.86	5.87	3.93	2.11	1.41	4.34	2.92	3.48	2.16	3.45	2.85

* Data not available for 1962-63 thru 1963-64
† Includes Engineering Technology

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1983 and 1984, Engineering Manpower Commission

TABLE 7-13

ENGINEERING DEGREES AWARDED BY CURRICULUM, 1982-1983

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.
Aerospace	2,207	512	97	168	25	2	41	3	1	48	7	0	49	17	3	2	0	0
Agricultural	704	146	51	84	5	1	1	0	1	6	1	0	7	5	2	0	0	0
Architectural	568	30	0	89	0	0	24	0	0	18	0	0	12	2	0	0	0	0
Biomedical	577	178	50	139	31	4	10	2	0	12	3	2	22	5	1	1	0	0
Ceramic	294	55	18	65	10	2	5	0	0	2	0	0	7	0	2	0	0	0
Chemical	7,499	1,509	379	1,703	157	23	207	16	6	195	28	8	309	115	31	9	0	0
Computer	2,643	1,420	102	506	216	8	62	25	1	59	18	1	185	106	5	3	2	0
Civil	10,484	3,317	390	1,315	280	18	213	45	3	300	65	4	369	229	23	12	2	0
Electrical	18,590	4,730	628	1,786	250	11	603	76	2	593	69	8	1,176	347	41	27	3	0
Engineering Science	1,298	408	170	207	46	12	21	6	0	22	1	2	33	9	7	2	0	0
Environmental	292	456	68	64	84	2	1	3	0	7	10	0	6	15	0	1	0	0
General	1,923	670	76	322	66	2	59	8	0	51	26	2	173	55	3	2	0	0
Industrial	3,808	1,410	108	996	187	9	159	32	1	155	24	4	112	86	2	5	2	0
Marine	699	163	18	27	4	0	8	1	0	12	0	0	12	5	0	2	0	0
Mechanical	16,484	3,001	399	1,503	186	9	397	31	3	338	36	3	562	206	22	21	7	0
Mining	1,019	280	54	109	36	5	7	0	0	7	3	0	9	2	1	2	0	0
Materials/Metallurgy	1,085	563	228	196	76	24	22	4	1	18	6	1	23	39	18	5	0	0
Nuclear	420	311	114	36	22	5	5	2	0	7	3	4	11	19	6	0	0	0
Petroleum	1,420	227	14	159	13	0	12	2	0	26	3	0	14	7	0	3	0	0
Systems	210	430	56	41	73	5	4	4	0	6	7	2	5	23	6	0	0	0
Other	247	93	3	51	29	0	1	1	0	1	0	0	2	2	0	0	0	0
Total	**72,471**	**19,909**	**3,023**	**9,566**	**1,796**	**142**	**1,862**	**258**	**19**	**1,883**	**310**	**41**	**3,098**	**1,294**	**173**	**97**	**16**	**0**

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1983 and 1984, Engineering Manpower Commission

TABLE 7-14

ENGINEERING DEGREES AWARDED BY CURRICULUM, 1983-84

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.
Aerospace	2,364	553	131	169	30	2	73	3	0	44	8	0	55	14	7	6	0	0
Agricultural	655	189	69	61	15	3	4	0	0	16	3	0	6	1	4	2	0	0
Architectural	341	35	0	49	2	0	25	0	0	14	0	0	15	2	0	1	1	0
Biomedical	611	211	49	154	47	7	13	2	0	15	1	0	17	6	4	0	0	0
Ceramic	361	87	18	81	16	1	1	0	0	6	0	0	15	0	3	0	0	0
Chemical	7,685	1,570	380	1,829	193	19	250	18	3	182	25	3	376	127	38	9	1	0
Computer	3,499	1,533	131	800	271	10	83	19	2	66	23	1	289	124	9	2	1	0
Civil	9,877	3,332	402	1,295	320	21	197	32	1	287	56	1	356	207	40	14	3	0
Electrical	20,495	5,336	693	1,996	362	15	626	76	2	642	114	8	1,320	395	74	19	12	0
Engineering Science	2,349	434	151	302	54	6	79	5	2	51	3	1	80	21	5	5	0	0
Environmental	301	424	79	67	98	7	5	3	2	1	7	0	3	15	1	0	0	0
General	2,037	885	55	373	97	3	58	14	0	67	22	1	238	79	3	6	0	0
Industrial	2,923	1,262	124	1,065	203	13	176	32	1	184	38	1	136	72	11	4	2	0
Marine	739	186	21	43	10	1	3	0	0	10	0	0	5	2	0	1	0	0
Mechanical	17,214	3,160	476	1,792	181	13	373	31	4	364	32	5	618	186	34	34	3	0
Mining	978	74	33	136	34	2	3	0	0	6	3	0	10	3	0	62	1	0
Materials/Metallurgy	1,011	583	241	239	83	22	18	12	6	27	7	2	27	46	24	0	0	0
Nuclear	434	282	115	40	11	6	4	2	0	12	11	1	11	13	3	0	1	0
Petroleum	1,587	260	11	170	15	0	17	1	0	35	4	1	22	12	0	0	0	0
Systems	222	479	49	47	83	1	11	6	1	7	7	0	7	28	7	1	0	0
Other	248	105	6	53	24	1	3	1	0	2	0	0	3	1	0	0	0	0
Total	76,931	21,226	3,234	10,761	2,149	153	2,022	257	24	2,038	364	25	3,609	1,354	267	112	25	0

* Includes Engineer Degrees

SOURCE: Engineering and Technology Degrees, 1969 through 1984 Series, Engineering Manpower Commission

TABLE 7-15

NUMBER AND PERCENT OF ENGINEERING DEGREES GRANTED BY LEVEL OF DEGREE AND MINORITY GROUP, 1969-70 - 1983-84

	TOTAL		BLACK		HISPANICS†		ASIAN/ PACIFIC		AMERICAN INDIAN		FOREIGN NATIONALS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1969-70*												
Bachelor's	42,966	100.0	378	0.88								
Master's	15,948	100.0	50	0.32				+				
Ph.D.	3,620	100.0	1	0.03								
1970-71*												
Bachelor's	43,167	100.0	407	0.94							1,565	3.62
Master's	16,383	100.0	47	0.29				+			2,952	18.02
Ph.D.	3,640	100.0	8	0.22							741	20.36
1971-72*												
Bachelor's	44,190	100.0	579	1.31							1,944	4.40
Master's**	17,356	100.0	78	0.45				+			2,973	17.13
Ph.D.	3,774	100.0	13	0.34							773	20.48
1972-73												
Bachelor's	43,429	100.0	657	1.51	866	1.99	684	1.58	46	0.11	2,136	4.92
Master's**	17,152	100.0	104	0.61	139	0.81	261	1.52	15	0.09	2,551	14.87
Ph.D.	3,587	100.0	13	0.36	12	0.34	55	1.53	1	0.03	708	19.74
1973-74												
Bachelor's	41,407	100.0	756	1.83	1,037	2.50	957	2.31	32	0.08	2,436	5.88
Master's**	15,885	100.0	158	0.99	192	1.21	425	2.68	4	0.03	3,099	19.51
Ph.D.	3,362	100.0	12	0.36	20	0.60	106	3.15	0	--	1,014	30.16
1974-75												
Bachelor's	38,210	100.0	734	1.92	1,060	2.77	883	2.31	44	0.12	2,466	6.45
Master's**	15,773	100.0	141	0.89	185	1.12	482	3.06	3	0.02	3,250	20.61
Ph.D.	3,039	100.0	17	0.55	28	0.92	141	4.64	2	0.07	891	29.32
1975-76												
Bachelor's	37,970	100.0	777	2.05	1,019	2.68	1,074	2.83	41	0.11	2,799	7.37
Master's**	16,506	100.0	154	0.93	191	1.16	782	4.74	14	0.09	5,691	22.56
Ph.D.	2,977	100.0	10	0.33	15	0.50	168	5.64	0	--	1,060	35.61
1976-77												
Bachelor's	40,095	100.0	844	2.11	1,035	2.58	1,146	2.86	36	0.09	2,996	7.47
Master's**	16,551	100.0	147	0.89	217	1.31	708	4.28	7	0.04	5,825	23.11
Ph.D.	2,814	100.0	16	0.57	22	0.78	158	5.62	1	0.04	995	35.36
1977-78												
Bachelor's	46,091	100.0	894	1.94	1,072	2.33	1,195	2.59	37	0.08	3,084	6.69
Master's**	16,182	100.0	202	1.25	243	1.50	797	4.93	4	0.03	3,720	22.99
Ph.D.	2,573	100.0	15	0.58	25	0.97	175	6.80	3	0.12	874	33.97
1978-79												
Bachelor's	52,598	100.0	1,076	2.05	1,212	2.30	1,532	2.91	59	0.11	3,788	7.20
Master's**	15,624	100.0	157	1.01	213	1.36	675	4.32	9	0.06	3,944	25.24
Ph.D.	2,815	100.0	19	0.68	22	0.78	177	6.29	0	-	929	33.00
1979-80												
Bachelor's	58,742	100.0	1,320	2.25	1,332	2.27	1,922	3.27	60	0.10	4,895	8.33
Master's**	17,243	100.0	167	0.97	247	1.43	827	4.80	4	0.02	4,512	26.17
Ph.D.	2,751	100.0	19	0.69	25	0.91	154	5.60	1	0.04	982	35.70
1980-81												
Bachelor's	62,935	100.0	1,445	2.30	1,513	2.40	2,267	3.60	90	0.14	5,622	8.93
Master's**	17,914	100.0	183	1.02	281	1.57	968	5.40	8	0.04	4,677	26.11
Ph.D.	2,841	100.0	16	0.56	20	0.70	148	5.21	3	0.11	1,054	37.10
1981-82												
Bachelor's	66,990	100.0	1,644	2.45	1,608	2.40	2,577	3.85	91	0.14	5,410	8.08
Master's	18,543	100.0	188	1.01	218	1.18	850	4.58	15	0.80	5,284	28.50
Ph.D.	2,887	100.0	11	0.38	26	0.90	124	4.30	2	0.07	1,167	40.42
1982-83												
Bachelor's	72,471	100.0	1,842	2.54	1,883	2.60	3,098	4.27	97	0.13	6,151	8.49
Master's	19,909	100.0	258	1.30	310	1.56	1,294	6.50	16	0.08	5,145	25.84
Ph.D.	3,023	100.0	19	0.63	41	1.36	173	5.72	0	-	1,192	39.43
1983-84												
Bachelor's	76,931	100.0	2,022	2.63	2,038	2.65	3,609	4.69	112	0.15	5,833	7.58
Master's**	21,226	100.0	257	1.21	364	1.72	1,354	6.38	25	0.12	5,728	27.00
Ph.D	3,234	100.0	24	0.74	25	0.77	267	8.26	0		1,253	38.75

* Totals for minority groups in these years include only numbers actually reported. The totals would be higher if all institutions had reported all categories. ** Includes engineering degrees. + Data were not broken out by any minority group, except blacks, prior to 1972-73.

† Includes Univ. of Puerto Rico as follows: 1973-1984 Bachelor's: 343, 397, 416, 339, 333, 324, 404, 329, 320, 338, 349, 355
1973-1984 Master's: 13, 6, 2, 7, 6, 9, 15, 7, 1, 8, 12, 9

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1975-1982, Engineering Manpower Commission

TABLE 7-16

ENGINEERING DEGREES AWARDED BY CURRICULUM, 1975-1982

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	B.S.	M.S.*	Ph.D	B.S.	M.S.*	Ph.D	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D
Aerospace	9,474	3,408	888	488	88	9	151	26	4	142	27	5	166	76	31	7	3	1
Agricultural	4,618	1,109	319	258	35	4	24	6	2	78	16	5	31	25	8	12	1	1
Architectural	3,083	267	6	301	12	0	207	1	0	100	4	0	79	11	0	2	0	0
Biomedical	2,880	1,467	414	548	101	18	54	9	0	45	16	2	106	57	18	7	0	0
Ceramic	1,646	391	130	260	26	2	15	1	0	12	1	1	24	15	6	2	1	0
Chemical	40,869	9,586	2,503	6,167	689	65	824	59	15	720	135	22	1,339	514	167	51	2	0
Computer	12,569	8,181	1,105	1,701	876	60	271	79	2	176	63	12	1,006	439	60	27	2	1
Civil	74,469	23,401	2,674	5,493	1,079	45	1,070	230	16	1,545	341	31	2,154	1,075	113	89	12	0
Electrical	97,380	29,591	4,535	4,638	958	86	2,964	395	42	2,241	386	37	3,697	1,343	269	108	6	1
Engineering Science	8,735	4,309	1,849	947	334	62	137	30	5	106	20	4	183	129	86	10	2	0
Environmental	1,918	4,082	414	320	391	21	12	17	1	17	60	6	23	111	17	2	2	0
General	15,462	5,230	859	1,419	286	24	302	53	3	352	61	4	758	284	47	8	1	1
Industrial	19,881	11,787	874	2,784	683	41	474	101	5	562	170	10	469	457	26	18	5	1
Marine	5,569	1,442	151	150	35	2	56	19	0	58	17	0	43	39	10	8	0	0
Mechanical	79,902	17,273	2,630	4,651	493	38	1,758	148	12	1,432	190	15	2,054	860	141	84	8	2
Mining	5,875	1,215	214	534	83	10	22	24	1	38	6	1	25	6	7	3	3	0
Materials/Metallurgy	6,293	3,624	1,675	813	246	57	111	17	3	172	37	13	136	144	118	9	2	1
Nuclear	3,739	3,224	858	201	135	16	43	22	3	43	33	6	73	104	40	4	3	3
Petroleum	5,707	1,313	153	390	33	3	46	8	3	142	13	1	90	31	8	5	0	0
Systems	1,746	3,012	349	245	308	19	37	34	4	28	37	1	38	91	13	0	0	0
Other	1,712	479	66	250	98	10	155	58	8	183	68	7	233	191	60	4	2	6
TOTAL	403,631	137,448	22,796	32,588	7,160	592	8,734	1,340	123	8,113	1,756	183	12,596	6,099	1,245	458	65	18

*Includes Engineer Degrees

Field: Engineering

Source: Engineering and Technology Degrees, 1978, 80,81,82, 83 & 84, Engineering Manpower Commission

TABLE 7-17

LEADING SCHOOLS IN NUMBER OF ENGINEERING DEGREES AWARDED TO WOMEN, 1984

	BACHELORS			MASTERS*			PhD			ALL DEGREES			RANK IN			
SCHOOL	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	'80	'81	'82	'83
Purdue U.	1,386	269	19.4	371	45	14.6	102	4	3.9	1,859	318	17.1	1	2	2	1
Georgia Tech.	1,315	213	17.6	426	52	12.2	54	3	5.6	1,795	286	15.9	7	1	3	2
U. of Illinois	1,423	217	15.2	444	38	8.6	144	5	3.5	2,011	260	12.9	9	3	5	3
Penn State	1,519	223	14.7	206	16	7.8	35	7	20.0	1,760	246	14.0	8	5	7	5
U. of CA-Berkely	828	168	16.7	506	70	13.8	157	7	4.5	1,491	245	16.4	15	12	4	11
Mass. Inst. of Tech.	789	148	18.8	630	82	13.0	167	7	4.2	1,586	237	14.9	2	6	6	12
U. of Michigan	1,162	188	16.2	563	41	7.3	76	2	2.6	1,801	231	12.8	4	9	8	6
Ohio State	1,112	188	16.9	333	38	11.4	60	3	5.0	1,505	229	15.2	29	18	10	15
VA Poly Inst.	1,019	192	17.6	243	31	12.8	60	4	6.7	1,394	227	17.8	14	17	9	9
Stanford	306	82	27.8	802	118	14.7	170	14	8.2	1,278	214	12.5	6	8	12	8
Texas A & M	1,419	180	16.7	251	29	11.6	42	2	4.8	1,712	211	12.3	3	4	1	4
N. C. State	974	160	16.4	198	19	9.6	38	1	2.6	1,210	180	14.9	34	27	17	23
Michigan State U.	708	154	21.6	111	19	17.1	31	4	12.9	850	177	20.8	5	7	11	14
Cornell U.	573	112	19.5	250	46	18.4	88	4	4.5	941	162	17.2	11	11	13	10
Michigan Tech.	995	156	15.7	73	1	1.4	8	0	0.0	1,076	157	14.6	33	21	22	20
Rensselear	695	119	17.1	336	32	9.4	46	3	6.5	1,077	154	14.3	§	+	23	13
U. of Texas	1,004	121	12.1	336	25	7.4	77	2	2.6	1,417	148	10.4	18	22	†	16
U. of Missouri-Rolla	1,057	126	11.9	175	13	7.4	16	0	0.0	1,248	139	11.1	28	13	16	19
U. of Washington	643	111	17.3	185	28	15.1	22	0	0.0	850	139	16.4	13	16	15	24
U. of Virginia	329	78	23.7	171	54	31.6	22	1	4.5	522	133	25.5	12	20	28	22
U. of Wisconsin	888	93	10.4	281	29	10.3	70	3	4.3	1,249	125	10.0	31	19	14	17
Pittsburgh	488	82	16.8	264	39	14.8	15	2	1.3	767	123	16.0	10	24	24	18
Rutgers	577	101	17.5	137	17	12.4	23	3	13.0	737	121	16.4	§	+	†	25
Auburn U.	735	116	15.8	33	3	9.1	3	0	0.0	771	119	15.4	§	15	18	29
Clarkson	660	111	16.8	61	5	8.2	12	1	8.3	733	117	16.0	26	38	30	43
U. of Minnesota	906	112	12.4	115	0	0.0	35	0	0.0	1,056	112	10.6	32	37	29	7
U. of Florida	652	86	13.2	214	24	11.2	51	2	3.9	928	112	12.1	36	27	33	27
U. of Tennessee	552	97	17.6	109	12	11.0	26	1	2.8	687	110	16.0	§	+	†	28
Columbia U.	303	65	21.5	315	39	12.4	34	4	11.8	652	108	16.6	§	+	25	26
Lehigh	540	99	18.3	94	7	7.4	39	2	5.1	673	108	16.0	14	22	†	34
U. of CA-Davis	386	80	20.7	135	24	17.8	36	2	5.6	557	106	19.0	21	32	21	42
Carnegie-Mellon	365	79	21.6	124	16	12.9	45	7	15.6	534	102	19.1	16	23	35	35
U. of Maryland	642	86	13.4	123	11	8.9	29	2	6.9	794	99	12.5	§	39	†	21
U. of CO-Boulder	423	83	19.6	131	15	11.5	23	1	4.3	577	99	17.2	17	10	19	41
Colorado Mines	469	69	14.7	123	24	19.5	17	2	11.8	609	95	15.6	20	29	31	32
U. of Southern Cal.	666	70	10.4	403	25	6.2	53	0	0.0	1,122	95	8.5	§	+	†	*
U. of CA-LA	379	56	14.8	241	35	14.5	62	3	4.8	682	94	13.8	§	28	36	44
Northeastern	717	71	9.9	205	22	8.8	3	0	0.0	925	93	10.0	§	+	20	40
Northwestern	298	76	25.5	182	11	6.0	65	3	4.6	545	90	16.5	39	30	26	31
U. of Penn.	243	53	21.8	177	37	20.9	35	0	0.0	455	90	17.8	§	+	†	*
Clemson	455	81	17.8	100	7	7.0	11	1	9.1	566	89	15.7	§	+	†	*
U. of Arizona	523	72	17.8	134	15	11.2	19	1	5.2	676	88	13.0	§	+	†	30
Arizona State	354	60	16.9	185	27	14.6	9	1	11.1	548	88	16.1	§	+	†	*
U.S. Military Acd.	987	86	8.7	0	0	0.0	0	0	0.0	987	86	8.7	§	+	†	*
Worcester Poly	508	82	16.1	73	4	5.5	4	0	0.0	585	86	14.7	37	+	†	45
Iowa State	784	78	9.9	105	6	5.7	32	1	3.1	921	85	9.2	25	25	34	37
U. of MO-Columbia	523	75	14.3	92	8	8.7	17	1	5.9	632	84	13.3	§	+	†	46
Tufts	223	72	32.3	41	12	29.3	1	0	0.0	265	84	31.7	§	+	†	*
Gen. Motors Inst.	351	83	23.6	0	0	0.0	0	0	0.0	351	83	23.6	37	36		36
Boston U.	317	59	18.6	83	23	27.7	0	0	0.0	400	82	20.5				38
TOTAL	35,242	5,656	16.1	10,890	1,294	11.9	2,184	116	5.3	48,316	7,066	14.6				

*Includes Engineer Degrees §Below 43rd +Below 40th †Below 37th *Below 46th

Field: Engineering

Source: Engineering and Technology Degrees, 1980-84 Series, Engineering Manpower Commission

TABLE 7-18

LEADING ENGINEERING SCHOOLS IN BACHELOR'S DEGREE AWARDS TO MINORITIES, 1984

SCHOOL	Total Degrees	Black	Hispanic+	Asian	Indian	Total Minority	% Minority	RANK IN 1980	1981	1982	1983
U. Calif.-Berkeley	828	12	12	308	2	334	40.3	1	2	1	1
San Jose State	346	11	29	129	0	169	48.8	27	16	*	4
Univ. of CA-L.A.	379	6	20	129	0	155	40.9	20	11	13	6
U. of Texas-Austin	1,004	16	67	68	3	154	15.3	5	8	7	13
CCNY	299	72	34	45	0	151	50.5	2	1	2	3
Georgia Tech.	1,315	81	26	36	2	145	11.7	15	6	4	14
CA State Poly.-Pomona	429	6	36	97	5	144	33.6	*	†	6	5
Poly. Inst. of NY	457	24	19	98	0	141	30.9	4	22	16	2
U. of Hawaii	192	0	0	132	0	132	68.8	3	3	3	9
Mass. Inst. of Tech.	789	49	16	57	2	124	15.7	9	19	11	7
U. of Washington	643	3	4	117	0	124	19.3	22	5	9	12
U.S. Mil. Academy	987	54	30	35	3	122	12.4	*	†	*	§
CA State-Long Beach	389	12	15	86	2	115	29.6	*	†	23	8
U. of Illinois	1,423	12	18	72	0	102	7.2	7	10	12	15
Prairie View A&M	106	97	0	0	0	97	91.5	15	6	5	§
CA Poly St. SLO	591	4	21	67	4	96	16.2	*	†	*	23
U. of Michigan	1,162	31	7	54	4	96	8.3	*	†	*	24
Columbia U.	303	7	14	74	0	95	31.4	*	†	*	18
Cornell	573	20	23	49	2	94	16.4	*	31	17	17
Purdue U.	1,386	52	10	22	0	84	6.1	*	†	19	20
NJ Inst. of Tech.	476	22	31	31	0	84	17.3	8	18	20	31
U. of Texas-El Paso	193	0	84	0	0	84	43.4	16	13	15	25
U. of CA-Davis	386	6	16	56	0	78	20.2	11	14	18	10
Rensselaer	205	24	30	22	0	76	37.1	*	†	*	§
NC State	974	52	3	19	1	75	7.7	*	†	*	39
Tuskegee	87	74	0	0	0	74	85.1	*	†	*	§
Stanford	306	24	20	29	1	74	24.2	23	27	29	§
Howard U.	108	74	0	0	0	74	68.5	26	12	22	29
U of Tennessee-Knox	552	22	12	38	0	72	13.0	5	8	8	19
U. of Miami-FL	301	13	37	20	0	70	23.3	25	28	26	11
U. of Florida	652	14	43	12	0	69	10.6	19	24	25	28
San Diego State	355	5	14	45	3	67	18.9	*	†	*	26
Drexel	560	28	2	35	0	65	11.6	*	25	*	30
Texas A&M	1,419	9	35	17	2	63	4.4	*	†	31	22
VPI	1,091	18	4	40	0	62	5.7	*	†	31	§
Geo. Washington U.	161	7	10	43	0	60	37.3	*	†	37	33
U. CA-Irvine	162	0	10	48	0	58	35.8	*	†	28	36
Texas A&I	122	0	54	4	0	58	47.5	*	†	*	50
Southern A&M U	153	57	0	0	0	57	37.3	10	15	27	52
U. MO-Rolla	1,057	22	8	26	1	57	4.4	*	†	*	40
NC A&T	97	56	0	0	0	56	57.7	12	14	*	38
Cal. State L.A.	155	13	10	32	0	55	35.5	*	†	*	§
New Mexico State	258	0	54	0	1	55	21.3	*	†	36	41
U. Southern CA	666	26	28	0	0	54	8.1	12	14	*	37
U. of D.C.	79	40	10	4	0	54	68.4	*	†	*	§
U. of New Mexico	292	0	43	8	3	54	18.5	*	†	38	21
Manhattan	369	5	43	5	0	53	14.4	*	†	*	§
Ohio State	1,112	12	11	28	1	52	4.7	*	†	*	51
U. of Cal.-Santa Barb.	272	3	17	30	1	51	18.8	*	†	*	§
Rutgers U.	577	16	12	21	0	49	8.5	*	†	*	27
U. Texas-Arl.	314	3	8	38	0	49	15.6	*	†	*	47
Pratt Inst.	155	32	7	10	0	49	31.6	21	30	21	43
Northwestern	298	16	4	28	0	48	16.1	*	†	34	44
Northeastern	717	17	11	18	0	46	6.4	*	†	*	32
U. of Arkansas	304	17	1	26	1	45	14.8	*	†	*	§
Gen. Motors Inst.	351	22	7	14	2	45	15.4	*	†	35	48
U. of Wisconsin	888	8	7	27	3	45	5.1	*	†	*	45
TOTAL-ALL SCHOOLS+	**76,576**	**2,022**	**1,683**	**3,609**	**112**	**7,426**	**9.7**				

+Excludes U. of Puerto Rico which had 355 graduates. *Below 27th †Below 31st *Below 39th §Below 53rd

FIELD: Engineering

SOURCE: Digest of Education Statistics 1977-1984; Fall Enrollment in Colleges and Universities, 1980; Projections of Education Statistics to 1992-93, and personal communications, 1984 and 1985, National Center for Education Statistics. Engineering Enrollments Series, 1970-84, Engineering Manpower Commission

TABLE 7-19

ENGINEERING ENROLLMENTS RELATED TO HIGH SCHOOL GRADUATES, ENTERING FRESHMEN AND TOTAL ENROLLMENTS, BY SEX, 1970 - 1983

YEAR	HIGH SCHOOL GRADUATES		FIRST TIME ENROLLMENT				TOTAL ENROLLMENT				First Time Enrollment as % of H.S. Graduates		Engineering as % of First Time Enrollment		Engineering as % of Total Enrollment	
			All Fields		Engineering		All Fields		Engineering							
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1970 Number	1,433,000	1,463,000	983,794	796,325	70,204	1,457	5,043,642	3,497,245	314,313	4,682						
% of Total	49.5	50.5	55.3	44.7	98.0	2.0	58.8	41.2	98.5	1.5	61.3		4.0		3.7	
% of Same Sex											68.7	54.2	6.8	0.2	6.3	0.1
1971 Number	1,506,000	1,530,000	967,859	797,766	57,025	1,541	5,207,004	3,741,640	287,551	5,303						
% of Total	49.6	50.4	54.8	45.2	97.4	2.6	58.2	41.8	98.2	1.8	58.2		3.3		3.3	
% of Same Sex											64.3	52.1	5.5	0.2	5.6	0.1
1972 Number	1,490,000	1,516,000	928,804	811,634	50,558	1,542	5,238,757	3,976,103	264,143	6,010						
% of Total	49.6	50.4	53.4	46.6	97.0	3.0	56.9	43.1	97.8	2.2	55.6		3.0		2.9	
% of Same Sex											62.3	53.5	5.0	0.2	5.2	0.2
1973 Number	1,602,000	1,609,000	930,783	826,070	49,508	2,417	5,371,052	4,231,071	255,259	7,744						
% of Total	49.9	50.1	53.0	47.0	95.3	4.7	55.9	44.1	97.1	2.9	54.7		3.0		2.7	
% of Same Sex											58.1	51.3	4.7	0.3	4.7	0.2
1974 Number	1,513,000	1,564,000	972,707	881,735	59,178	4,266	5,622,429	4,601,300	265,590	12,397						
% of Total	49.2	50.8	52.5	47.5	93.3	6.7	55.0	45.0	95.5	4.5	60.2		3.4		2.7	
% of Same Sex											64.3	56.4	5.2	0.5	4.9	0.3
1975 Number	1,541,000	1,599,000	991,914	918,211	68,613	6,730	6,148,997	5,035,862	292,955	19,923						
% of Total	49.1	50.9	51.9	48.1	91.1	8.9	55.0	45.0	93.6	6.4	60.8		3.9		2.8	
% of Same Sex											64.4	57.4	5.6	0.7	5.1	0.4
1976 Number	1,554,000	1,601,000	996,000	926,000	73,705	8,545	5,810,828	5,210,309	315,030	29,970						
% of Total	49.3	50.7	51.8	48.2	89.6	9.4	52.8	47.2	92.4	7.6	61.0		4.3		3.1	
% of Same Sex											63.5	58.7	5.6	0.9	5.9	0.5
1977 Number	1,548,000	1,606,000	1,172,147	1,259,453	78,859	9,921	5,789,076	5,496,771	340,265	33,917						
% of Total	49.1	50.9	48.2	51.8	88.8	10.2	51.3	48.7	90.9	9.1	77.1		3.6		3.3	
% of Same Sex											75.2	78.4	6.7	0.8	5.9	0.6
1978 Number	1,535,000	1,599,000	1,141,777	1,247,850	84,016	11,789	5,640,998	5,619,094	356,438	40,156						
% of Total	49.0	51.0	51.0	49.0	87.7	12.3	50.2	49.8	89.9	10.1	76.2		4.0		3.5	
% of Same Sex											74.4	78.0	7.4	0.9	6.3	0.7
1979 Number	1,531,800	1,602,400	1,194,534	1,343,585	89,693	14,031	5,682,877	5,887,022	383,876	49,575						
% of Total	48.9	51.1	47.1	52.9	86.5	13.5	49.1	50.9	88.6	11.4	79.9		4.1		3.7	
% of Same Sex											77.0	82.6	7.6	1.1	6.7	0.8
1980 Number	1,355,198	1,401,425	1,233,446	1,391,629	94,145	16,004	5,874,374	6,222,521	411,709	58,220						
% of Total	49.2	50.8	47.0	53.0	85.5	14.5	48.6	51.4	87.6	12.4	95.2		4.2		3.8	
% of Same Sex											91.0	99.3	7.6	1.2	7.0	0.9
1981 Number	1,339,922	1,384,642	1,217,680	1,377,741	97,042	18,238	5,975,056	6,396,616	431,202	66,790						
% of Total	49.2	50.8	46.9	53.1	84.2	15.8	48.3	51.7	86.6	13.4	95.3		4.4		4.0	
% of Same Sex											90.9	99.5	8.0	1.3	7.2	1.0
1982 Number	1,474,000	1,527,000	1,199,237	1,306,229	96,148	19,155	5,981,272	6,376,728	441,916	75,413						
% of Total	49.1	50.9	47.9	52.1	83.4	16.6	48.4	51.6	85.4	14.6	83.5		4.6		4.2	
% of Same Sex											81.4	85.5	8.0	1.5	7.4	1.2
1983 Number	1,451,000	1,465,000	1,159,049	1,284,654	90,949	18,689	6,023,725	6,440,936	452,804	79,441						
% of Total	49.8	50.2	47.4	52.6	83.0	17.0	48.3	51.7	85.1	14.9	83.8		4.5		4.3	
% of Same Sex											79.9	87.7	7.8	1.5	7.5	1.2

FIELD: Engineering

SOURCE: The Technological Marketplace: Supply and Demand for Scientists and Engineers, 1984 and projections by the Scientific Manpower Commission, 1985

TABLE 7-20

BACHELOR'S DEGREES IN ENGINEERING AS A PERCENTAGE OF FRESHMAN ENROLLMENT FOUR YEARS EARLIER, 1973-1984, Projected to 1989

Freshman Class Yr. Fall	Bachelor's Degree Year	MEN			WOMEN		
		Freshmen	B.S. Degrees	Percent	Freshmen	B.S. Degrees	Percent
1969	1973	72,932	42,805	58.7	1,181	624	52.8
1970	1974	70,204	40,663	57.9	1,457	744	51.1
1971	1975	57,025	37,332	65.5	1,541	878	57.0
1972	1976	50,558	36,594	72.4	1,542	1,376	89.2
1973	1977	49,512	38,134	77.0	2,417	1,961	81.1
1974	1978	59,178	42,815	72.4	4,266	3,280	76.9
1975	1979	68,613	47,873	69.8	6,730	4,716	70.1
1976	1980	73,705	53,062	72.0	8,545	5,680	66.5
1977	1981	78,859	56,390	71.5	9,921	6,557	66.1
1978	1982	87,016	58,850	67.6	11,789	8,140	69.0
1979	1983	89,693	62,705	69.9	14,031	9,535	67.9
1980	1984	94,145	66,170	70.3	16,004	10,761	67.2
1981	1985	97,042	69,051 [1]	71.2 [1]	18,238	12,286 [2]	67.4 [2]
1982	1986	96,148	69,261 [1]	72.0 [1]	19,155	12,700 [2]	66.3 [2]
1983	1987	90,949	64,236 [1]	70.7 [1]	18,689	12,590 [2]	67.4 [2]
1984	1989	87,892	62,052 [3]	70.6 [4]	17,356	11,663 [3]	67.2 [4]

[1] Estimated at 89.7% of Jr. year enrollments 2 years earlier.
[2] Estimated at 90.6% of the Jr. year enrollments 2 years earlier.
[3] Estimated ratio times freshmen enrollment.
[4] Average of most recent 8 years.

FIELD: Engineering

SOURCE: Engineering and Technology Enrollments Series, Fall 1971-1984, Engineering Manpower Commission

TABLE 7-21

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED IN ENGINEERING, BY DEGREE LEVEL, FALL 1971-1984

	UNDERGRADUATE STUDENTS								GRADUATE STUDENTS			
	Total								Total			
	First Year		Second Year		Third Year		4/5th Year		Full Time		Part Time	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL STUDENTS/FALL												
1971	58,566	100.0	47,948	100.0	48,543	100.0	55,768	100.0	36,505	100.0	27,302	100.0
1972	52,100	100.0	42,272	100.0	45,874	100.0	54,481	100.0	36,337	100.0	24,940	100.0
1973	51,929	100.0	40,519	100.0	41,673	100.0	52,588	100.0	34,492	100.0	26,114	100.0
1974	63,444	100.0	45,939	100.0	43,007	100.0	48,715	100.0	32,627	100.0	27,572	100.0
1975	75,343	100.0	55,891	100.0	49,338	100.0	50,807	100.0	37,285	100.0	21,173	100.0
1976	82,250	100.0	63,003	100.0	56,835	100.0	55,747	100.0	36,479	100.0	26,842	100.0
1977	88,780	100.0	70,326	100.0	64,721	100.0	65,421	100.0	39,235	100.0	25,055	100.0
1978	98,805	100.0	72,150	100.0	69,816	100.0	73,466	100.0	38,381	100.0	24,133	100.0
1979	103,724	100.0	78,594	100.0	74,928	100.0	83,212	100.0	41,384	100.0	25,768	100.0
1980	110,149	100.0	84,982	100.0	80,024	100.0	89,962	100.0	44,335	100.0	23,250	100.0
1981	115,280	100.0	87,519	100.0	86,633	100.0	98,145	100.0	47,772	100.0	29,818	100.0
1982	115,303	100.0	89,785	100.0	90,541	100.0	107,761	100.0	50,410	100.0	31,589	100.0
1983	109,638	100.0	89,515	100.0	91,233	100.0	115,758	100.00	57,366	100.0	33,674	100.0
1984	105,248	100.0	83,946	100.0	85,509	100.0	115,931	100.0	57,277	100.0	35,888	100.0
WOMEN												
1971	1,541	2.6	964	2.0	725	1.5	583	1.0	712	2.0	388	1.4
1972	1,542	3.0	1,119	2.6	970	2.1	802	1.5	830	2.3	487	2.0
1973	2,417	4.7	1,487	3.7	1,140	2.7	1,020	1.9	869	2.6	547	2.2
1974	4,266	6.7	2,467	5.4	1,724	4.0	1,362	2.8	1,308	4.0	831	3.0
1975	6,730	8.9	4,197	7.5	2,862	5.8	2,063	4.1	1,585	4.3	858	3.2
1976	8,545	10.4	5,848	9.3	4,407	7.8	3,136	5.6	1,693	4.6	1,083	4.0
1977	9,921	11.2	7,537	10.7	6,193	9.6	5,122	7.8	2,661	6.8	1,291	5.2
1978	11,789	12.3	8,447	11.7	7,453	10.7	6,829	9.3	2,930	7.6	1,294	5.4
1979	14,031	13.5	10,400	13.2	8,853	11.8	8,743	10.5	3,409	8.2	1,735	6.7
1980	16,004	14.5	12,094	14.2	10,269	12.8	10,577	11.8	4,014	9.1	2,344	10.1
1981	18,238	15.8	13,285	15.2	12,023	13.9	12,503	12.7	4,627	9.7	2,894	9.7
1982	19,155	16.6	14,704	16.4	13,561	15.0	14,908	13.8	5,585	11.1	3,250	10.3
1983	18,689	17.0	15,143	16.9	14,019	15.4	16,798	14.5	6,506	11.3	4,104	12.2
1984	17,356	16.5	14,264	17.0	13,897	15.5	17,142	14.8	6,761	11.8	4,256	11.9
BLACK												
1971	1,289	2.2	926	1.9	693	1.4	614	1.1	192	0.5	154	0.6
1972	1,477	2.8	965	2.3	838	1.8	695	1.3	238	0.6	181	0.7
1973	2,130	4.1	1,324	3.3	1,056	2.5	998	1.9	339	1.0	229	0.9
1974	2,848	4.5	1,632	3.6	1,221	2.8	1,126	2.3	356	1.1	407	1.5
1975	3,840	5.1	1,980	3.5	1,366	2.8	1,203	2.4	390	1.0	361	1.3
1976	4,372	5.3	2,483	3.9	1,633	2.9	1,340	2.4	427	1.2	332	1.2
1977	4,728	5.3	2,928	4.2	2,104	3.3	1,628	2.5	438	1.1	487	1.9
1978	5,493	5.7	3,103	4.3	2,330	3.3	2,028	2.8	450	1.2	393	1.6
1979	6,339	6.1	3,451	4.4	2,687	3.6	2,309	2.8	480	1.2	348	1.4
1980	6,661	6.0	3,963	4.7	2,903	3.6	2,654	3.0	588	1.3	399	1.7
1981	7,015	6.1	4,398	5.0	3,290	3.8	2,908	3.0	553	1.2	506	1.7
1982	6,715	5.8	4,436	4.9	3,261	3.6	3,186	3.0	634	1.3	503	1.6
1983	6,342	5.8	4,314	4.8	3,487	3.8	3,674	3.2	803	1.4	673	2.0
1984	6,245	5.9	4,084	4.9	3,461	3.9	3,661	3.2	793	1.4	606	1.7

TABLE 7-21 continued

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED IN ENGINEERING, BY DEGREE LEVEL, FALL 1971-1984

	UNDERGRADUATE STUDENTS								GRADUATE STUDENTS			
					Total				Total			
	First Year		Second Year		Third Year		4/5th Year		Full Time		Part Time		Full Time		Part Time	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
HISPANIC*																
1974	1,930	3.0	1,314	2.9	1,276	3.0	2,060	4.2	6,580	3.3	483	2.9	309	0.9	337	1.2
1975	2,169	2.9	1,639	2.9	1,372	2.8	2,127	4.2	7,307	3.2	430	2.5	407	1.1	318	1.2
1976	1,766	2.2	1,255	2.0	1,026	1.8	1,091	2.0	5,138	2.0	419	2.1	401	1.1	261	1.0
1977	2,645	3.0	1,822	2.6	1,702	2.6	2,326	3.6	8,495	2.9	393	1.9	475	1.2	390	1.6
1978	3,296	3.4	2,078	2.9	1,930	2.8	2,527	3.4	9,831	3.2	570	2.5	426	1.1	312	1.3
1979	3,768	3.6	2,354	3.0	2,230	3.0	2,775	3.3	11,127	3.3	941	3.6	472	1.1	381	1.5
1980	4,208	3.8	2,543	3.0	2,282	2.9	2,827	3.1	11,860	3.2	1,045	3.2	476	1.1	403	1.7
1981	4,768	4.1	2,976	3.4	2,598	3.0	3,273	3.3	13,615	3.5	744	2.3	595	1.2	408	1.4
1982	4,421	3.8	3,106	3.5	2,928	3.2	3,580	3.3	14,035	3.5	1,141	3.6	564	1.1	400	1.3
1983	4,760	4.3	3,251	3.6	3,113	3.4	4,058	3.5	15,182	3.7	1,280	3.7	731	1.3	510	1.5
1984	4,814	4.6	3,290	3.9	3,335	3.7	4,346	3.8	15,775	4.0	1,300	3.7	764	1.3	548	1.5
ASIAN/PACIFIC																
1974	1,130	1.8	842	1.8	966	2.2	1,024	2.1	3,962	2.0	286	1.7	909	2.8	1,048	3.8
1975	1,155	1.5	1,007	1.8	1,037	2.1	1,094	2.2	4,293	1.9	350	2.1	1,318	3.5	854	3.1
1976	1,560	1.9	1,363	2.2	1,310	2.3	1,392	2.5	5,625	2.2	509	2.6	1,422	3.9	836	3.1
1977	1,847	2.1	1,923	2.7	1,796	2.8	1,804	2.8	7,370	2.5	403	2.0	1,560	4.0	952	3.8
1978	2,169	2.3	2,006	2.8	2,200	3.1	2,265	3.1	8,640	2.8	377	1.7	1,533	4.0	973	4.0
1979	3,133	3.0	2,578	3.3	2,800	3.7	2,966	3.6	11,471	3.4	772	3.0	1,603	3.9	1,033	4.0
1980	2,889	2.6	2,791	3.3	2,746	3.4	3,253	3.6	11,679	3.2	1,093	3.4	1,657	3.7	1,453	6.2
1981	4,035	3.5	3,247	3.7	3,381	3.9	3,799	3.9	14,462	3.7	1,353	4.1	2,217	4.6	1,591	5.3
1982	4,098	3.6	3,492	3.9	3,800	4.2	4,299	4.0	15,689	3.9	1,562	4.9	2,531	5.0	1,434	4.5
1983	4,983	4.5	4,452	5.0	5,201	5.7	6,046	5.2	20,682	5.1	2,325	6.6	3,636	6.3	2,333	6.9
1984	5,614	5.3	4,901	5.8	5,951	6.7	7,147	6.2	23,613	6.0	1,836	5.3	3,280	5.7	2,322	6.5
AMERICAN INDIAN																
1974	102	0.2	73	0.2	72	0.2	76	0.2	323	0.2	24	0.1	19	0.1	41	0.1
1975	120	0.2	73	0.1	65	0.1	70	0.1	328	0.1	27	0.2	27	0.1	22	0.1
1976	171	0.2	93	0.2	93	0.2	89	0.2	446	0.2	32	0.1	25	0.1	26	0.1
1977	244	0.3	156	0.2	118	0.2	100	0.2	618	0.2	42	0.2	39	0.1	35	0.1
1978	225	0.2	161	0.2	121	0.2	118	0.2	625	0.2	59	0.3	34	0.1	31	0.1
1979	317	0.3	146	0.2	152	0.2	144	0.2	759	0.2	60	0.2	57	0.1	17	0.1
1980	365	0.3	187	0.2	174	0.2	177	0.2	903	0.2	117	0.4	45	0.1	63	0.2
1981	412	0.4	189	0.2	176	0.2	193	0.2	970	0.3	113	0.3	42	0.1	53	0.2
1982	371	0.3	266	0.3	205	0.2	236	0.2	1,078	0.3	145	0.5	89	0.2	64	0.2
1983	376	0.3	239	0.3	236	0.3	276	0.2	1,127	0.3	145	0.4	53	0.1	60	0.2
1984	410	0.4	241	0.3	232	0.3	303	0.3	1,186	0.3	92	0.3	73	0.1	51	0.1
FOREIGN NATIONAL																
1977													11,300	28.8	1,962	7.8
1978													11,532	30.0	2,361	9.8
1979	4,984	4.8	4,771	6.1	5,583	7.5	6,298	7.6	21,636	6.4	1,125	4.4	14,061	34.0	1,555	6.0
1980	5,095	4.6	5,436	6.4	6,496	8.1	7,627	8.5	24,654	6.8	1,474	4.6	16,120	36.4	2,690	11.6
1981	4,974	4.3	5,611	6.4	6,831	7.9	7,951	8.1	25,367	6.5	1,218	3.7	17,985	37.6	2,577	8.6
1982	4,925	4.3	5,148	5.7	6,176	6.8	7,358	6.8	23,607	5.9	1,443	4.5	17,651	35.0	2,670	8.5
1983	5,234	4.8	5,161	5.8	6,194	6.8	8,394	7.3	24,983	6.2	1,454	4.1	20,110	35.0	3,530	10.5
1984	4,850	4.6	5,478	6.5	6,211	6.9	8,275	7.1	24,814	6.3	1,305	3.7	20,294	35.4	3,579	10.0

* Includes enrollment at the University of Puerto Rico.

FIELD: Engineering

SOURCE: Engineering and Technology Enrollments, Fall 1984, Part I, Engineering Manpower Commission

TABLE 7-22

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED FULL TIME BY CURRICULUM AND LEVEL, FALL 1982

Curriculum	Total All Students		Women		Black		Hispanic		Asian/ Pacific		American Indian		Foreign	
	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad
Aerospace	15,466	1,826	1,444	104	418	11	514	14	640	68	50	1	532	556
%	100.0	100.0	9.3	5.7	2.7	0.6	3.3	0.8	4.1	3.7	0.3	0.1	3.4	30.5
Agricultural	2,674	693	297	51	20	5	39	7	31	9	6	2	131	220
%	100.0	100.0	11.1	7.4	0.8	0.7	1.5	1.0	1.2	1.3	0.3	0.3	4.9	31.8
Architectural	2,373	85	49	7	234	-	95	1	57	2	9	1	245	38
%	100.0	100.0	20.9	8.2	9.9	-	4.0	1.2	2.4	2.4	0.4	1.2	10.3	44.7
BioEngineering	3,701	976	1,133	228	148	18	151	12	307	49	17	3	121	135
%	100.0	100.0	30.6	23.4	4.0	1.8	4.1	1.2	8.3	5.0	0.5	0.3	3.3	13.8
Ceramic	1,063	287	305	35	35	-	13	4	32	6	-	-	16	57
%	100.0	100.0	28.7	12.2	3.3	-	1.2	1.4	3.0	2.1	-	-	1.5	19.9
Chemical	27,794	5,452	7,516	738	1,308	66	1,221	93	1,331	341	77	5	1,261	1,679
%	100.0	100.0	27.0	13.5	4.7	1.2	4.4	1.7	4.8	6.3	0.3	0.1	4.5	30.8
Civil	35,403	7,680	4,867	783	1,095	81	1,774	122	1,500	340	131	12	4,582	3,232
%	100.0	100.0	13.8	10.2	3.1	1.1	5.0	1.6	4.2	4.4	0.4	0.2	12.9	42.1
Computer	21,367	4,221	5,168	878	1,213	58	1,263	58	2,028	336	83	6	1,297	1,429
%	100.0	100.0	24.2	20.8	5.7	1.4	5.9	1.4	9.5	8.0	0.4	0.1	6.1	33.4
Elec/Electronic	110,666	13,791	13,672	1,277	6,194	228	4,666	205	8,967	1,012	348	22	8,187	4,621
%	100.0	100.0	12.4	9.3	5.6	1.7	4.2	1.5	8.1	7.3	0.3	1.6	7.4	33.5
Engr. Science	5,713	1,400	1,106	206	152	12	69	12	205	43	11	2	192	433
%	100.0	100.0	19.4	14.7	2.7	0.9	1.2	0.9	3.6	3.1	0.2	0.1	3.4	30.9
Environmental	827	970	229	251	9	11	16	5	19	21	4	1	30	208
%	100.0	100.0	27.7	25.9	1.1	1.1	1.9	0.5	2.3	2.2	0.5	0.1	3.6	21.4
General	52,368	1,317	9,255	310	2,228	89	1,687	29	3,055	194	145	4	1,967	862
%	100.0	100.0	17.7	23.5	4.3	6.8	3.2	2.2	5.8	14.7	0.3	0.3	3.8	65.5
Industrial	15,178	2,811	4,556	510	773	52	1,020	44	526	97	28	3	1,153	981
%	100.0	100.0	30.0	18.1	5.1	1.9	6.7	1.6	3.5	3.5	0.2	0.1	7.6	34.9
Marine	2,434	727	186	56	29	-	53	4	58	10	2	-	70	232
%	100.0	100.0	7.6	7.7	1.2	-	2.2	0.6	2.4	1.4	0.1	-	2.9	31.9
Materials & Metals	3,419	2,441	752	339	99	21	132	27	156	148	8	-	113	940
%	100.0	100.0	22.0	13.9	2.9	0.9	3.9	1.1	4.6	6.1	0.2	-	3.3	38.5
Mechanical	69,163	8,868	7,372	564	2,806	104	2,414	92	3,071	462	170	6	3,599	3,554
%	100.0	100.0	10.7	6.7	4.1	1.2	3.5	1.0	4.4	5.2	0.3	0.1	5.2	40.1
Mining	2,743	898	470	120	27	9	39	6	59	21	17	3	158	227
%	100.0	100.0	17.1	13.4	1.0	1.0	1.4	0.7	2.2	2.3	0.6	0.3	5.8	25.3
Nuclear	1,868	1,297	215	96	33	9	62	16	88	67	4	2	66	400
%	100.0	100.0	11.5	7.4	1.6	0.7	3.3	1.2	4.7	5.2	0.2	0.2	3.5	30.8
Petroleum	5,632	560	666	53	98	8	182	5	117	24	17	-	518	198
%	100.0	100.0	11.8	9.5	1.7	1.4	3.2	0.9	2.1	4.3	0.3	-	9.2	35.4
Systems	1,912	697	677	132	69	9	35	8	59	26	3	-	84	249
%	100.0	100.0	35.4	18.9	3.6	1.3	1.4	1.2	3.1	3.7	0.2	-	4.4	35.7
All Other	12,865	280	2,276	33	463	2	330	-	1,267	4	54	-	492	43
%	100.0	100.0	17.7	11.8	3.6	0.7	2.6	-	9.9	1.4	0.4	-	3.8	15.4
TOTAL	394,635	57,277	62,659	6,761	17,451	793	15,775	764	23,613	3,280	1,186	73	24,814	20,294
%	100.0	100.0	15.9	11.8	4.4	1.4	4.0	1.3	6.0	5.7	0.3	0.1	6.3	35.4

FIELD: Nuclear Engineering

SOURCE: Nuclear Engineering Enrollments and Degrees, 1984, U.S. Department of Energy, DOE/ER-016512, March 1985.

TABLE 7-23

ENROLLMENTS AND DEGREES IN NUCLEAR ENGINEERING BY SEX, MINORITY GROUP AND EDUCATION LEVEL, 1979-1984

MINORITY GROUP, SEX & YEAR	ENROLLMENTS								DEGREES					
	Undergraduate				Graduate									
	3rd Year		4th Year		Master's		Ph.D		Bachelor's		Master's		Ph.D.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL														
1979	807	100.0	933	100.0	958	100.0	630	100.0	794	100.0	463	100.0	117	100.0
1980	743	100.0	786	100.0	866	100.0	619	100.0	695	100.0	365	100.0	116	100.0
1981	724	100.0	838	100.0	876	100.0	577	100.0	642	100.0	315	100.0	131	100.0
1982	800	100.0	1,005	100.0	946	100.0	606	100.0	654	100.0	339	100.0	126	100.0
1983	849	100.0	936	100.0	951	100.0	564	100.0	674	100.0	325	100.0	124	100.0
1984	757	100.0	967	100.0	924	100.0	559	100.0	728	100.0	316	100.0	132	100.0
WOMEN														
1979	61	7.56	10	1.07	55	5.74	21	3.33	36	4.53	12	2.59	1	0.85
1980	69	9.29	68	8.65	64	7.39	31	5.22	44	6.33	19	5.21	-	-
1981	65	8.98	57	6.80	55	6.28	26	4.51	46	7.17	22	6.98	6	4.58
1982	68	8.50	77	7.66	74	7.82	30	4.95	42	6.42	27	7.96	7	5.56
1983	64	7.53	80	8.54	64	6.73	31	5.50	45	6.68	18	5.54	6	4.84
1984	65	8.59	73	7.55	76	8.23	37	6.62	60	8.24	17	5.38	7	5.30
BLACKS														
1979	9	1.11	10	1.07	15	1.57	5	0.79	5	0.63	-	-	1	0.85
1980	10	1.35	9	1.15	12	1.39	8	1.29	7	1.01	4	1.10	-	-
1981	8	1.10	5	0.60	9	1.03	6	1.04	4	0.62	4	1.27	1	0.76
1982	9	1.13	3	0.30	12	1.27	6	0.99	7	1.07	5	1.47	-	-
1983	8	0.94	10	1.07	7	0.74	7	1.24	3	0.45	1	0.31	-	-
1984	5	0.66	8	0.83	6	0.65	9	1.61	4	0.55	1	0.32	-	-
HISPANICS														
1979	6	0.74	9	0.96	11	1.15	1*	0.16	10	1.26	2	0.43	1	0.85
1980	10	1.35	12	1.53	11	1.27	3	0.48	6	0.86	4	1.10	-	-
1981	14	1.93	14	1.67	10	1.14	10	1.73	8	1.25	8	2.53	-	-
1982	15	1.88	16	1.59	8	0.85	6	0.99	8	1.22	3	0.88	1	0.79
1983	11	1.29	14	1.49	14	1.47	6	1.06	9	1.34	4	1.23	1	0.81
1984	3	0.40	7	0.72	16	1.73	3	0.54	11	1.51	5	1.58	1	0.76
ASIAN AMERICAN														
1979	7	0.87	12	1.29	26	2.71	17	2.70	7	0.88	13	2.81	6	5.13
1980	9	1.21	8	1.02	21	2.42	17	2.75	6	0.86	11	3.01	3	2.59
1981	8	1.10	12	1.43	18	2.05	14	2.43	8	1.25	5	1.59	3	2.29
1982	14	1.75	12	1.19	22	2.33	14	2.31	12	1.83	9	2.65	6	4.76
1983	13	1.53	13	1.39	25	2.63	18	3.19	11	1.63	7	2.15	3	2.42
1984	16	2.11	10	1.03	20	2.17	27	4.83	3	0.41	9	2.85	4	3.03
AMERICAN INDIAN														
1979	-	-	-	-	-	-	-	-	-	-	1	0.22	-	-
1980	2	0.27	1	0.13	1	0.12	-	-	-	-	-	-	-	-
1981	1	0.14	1	0.12	1	0.11	1	0.17	-	-	-	-	-	-
1982	-	-	-	-	1	0.11	-	-	-	-	-	-	-	-
1983	-	-	1	0.11	3	0.32	-	-	-	-	-	-	-	-
1984	1	0.13	-	-	2	0.22	-	-	1	0.14	-	-	-	-
FORIEGN NATIONALS														
1979	79	9.79	72	7.72	265	27.66	285	45.24	44	5.54	110	23.76	29	24.79
1980	58	7.81	61	7.76	218	25.17	314	50.73	36	5.18	104	28.49	49	42.24
1981	43	5.94	79	9.43	205	23.40	262	45.41	42	6.54	81	25.71	63	48.09
1982	50	6.25	91	9.06	279	29.49	275	45.38	56	8.56	84	24.78	55	43.65
1983	57	6.71	58	5.77	309	32.49	287	50.89	52	7.72	100	30.77	64	51.61
1985	44	5.81	76	7.86	256	27.71	257	45.98	43	5.91	123	38.92	59	44.69

* These figures do not include students of the University of Puerto Rico.

FIELD: Health Physics/Radiation Protection

SOURCE: Health Physics/Radiation Protection Enrollments and Degrees 1984, U.S. Department of Energy, DOE/ER-0193, March 1984

TABLE 7-24

ENROLLMENTS AND DEGREES IN HEALTH PHYSICS/RADIATION PROTECTION BY SEX, MINORITY GROUP AND EDUCATION LEVEL, 1979-1984

Sex Minority Group & Year	ENROLLMENTS (FALL TERM)								DEGREES YEAR ENDING JUNE 30					
	Undergraduate				Graduate									
	Junior		Senior		Master's		Ph.D.		Bachelor's		Master's		Ph.D.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL														
1979	161	100.0	155	100.0	421	100.0	305	100.0	137	100.0	155	100.0	64	100.0
1980	247	100.0	154	100.0	427	100.0	317	100.0	142	100.0	186	100.0	52	100.0
1981	172	100.0	155	100.0	446	100.0	304	100.0	125	100.0	168	100.0	61	100.0
1982	166	100.0	175	100.0	479	100.0	283	100.0	99	100.0	169	100.0	55	100.0
1983	180	100.0	200	100.0	478	100.0	181	100.0	136	100.0	163	100.0	44	100.0
1984	202	100.0	198	100.0	625	100.0	180	100.0	146	100.0	181	100.0	50	100.0
WOMEN														
1979	31	19.25	41	26.45	71	16.86	54	17.70	44	32.12	29	18.71	9	14.06
1980	89	34.63	47	30.52	94	22.01	60	18.93	41	28.87	28	15.05	9	17.31
1981	62	36.05	56	36.13	125	28.03	51	16.78	28	22.40	40	23.81	9	14.75
1982	62	37.35	48	27.43	128	26.72	67	23.67	40	40.40	42	24.85	5	9.09
1983	56	31.11	72	36.00	128	26.78	37	20.44	39	28.68	51	31.29	6	13.64
1984	65	32.18	65	32.83	172	27.52	29	16.11	51	34.93	43	23.76	10	20.00
BLACKS														
1979	10	6.21	9	5.81	7	1.66	5	1.64	9	6.57	2	1.29	1	1.56
1980	21	8.17	9	5.84	9	2.11	2	0.63	7	4.93	1	0.54		
1981	11	6.40	11	7.10	7	1.57	3	0.99	6	4.80	1	0.60		
1982	9	5.42	6	3.43	15	3.13	1	0.35	8	8.08	5	2.96		
1983	15	8.33	10	5.00	5	1.26	1	0.55	4	2.94	4	2.45		
1984	13	6.44	10	5.05	14	2.24	2	1.11	6	4.11	1	0.55		
HISPANICS														
1979	9	5.59	2	1.29	6	1.43	5	1.64	4	2.92				
1980	12	4.67	7	4.55	7	1.64	3	0.95	2	1.41	3	1.61	1	1.92
1981	8	4.65	8	5.16	8	1.79	2	0.66	3	2.40	1	0.60	2	3.28
1982	9	5.42	5	2.86	6	1.25	2	0.71	2	2.02	2	2.96	1	1.82
1983	8	4.44	8	4.00	8	1.67	3	1.66	2	1.47	1	0.61	1	2.27
1984	10	4.95	5	2.23	11	1.76	2	1.11	4	2.75	5	2.76		
ASIAN AMERICANS														
1979			3	1.94	5	1.19	11	3.61	1	0.73	4	2.58		
1980	19	7.39	15	9.74	3	0.70	16	5.05			2	1.08	1	1.92
1981	15	8.72	11	7.10	5	1.12	14	4.67	7	5.60	5	2.98	1	1.64
1982	18	10.84	12	6.86	10	2.09	9	3.18	1	1.01	2	1.18	2	3.64
1983	15	8.33	15	7.50	8	1.67	9	4.97	10	7.35	7	4.29	3	6.82
1984	15	7.43	16	8.08	10	1.60	13	7.22	10	6.85	2	1.10	6	12.00
FOREIGN NATIONALS														
1979	6	3.73	3	1.94	36	8.55	54	17.70	2	1.49	16	10.32	6	9.38
1980	0		3	1.95	36	8.43	62	19.56	2	1.39	21	11.29	7	13.46
1981	2	1.63	7	4.52	58	13.00	48	15.79	4	3.13	17	10.06	12	9.23
1982	4	2.41	2	1.14	55	11.48	51	18.02	2	1.94	29	17.16	8	14.55
1983			3	1.50	60	12.55	40	22.10	5	3.68	20	12.27	7	15.91
1984	1	0.49	2	1.01	48	7.68	40	22.22	5	3.42	22	12.15	10	20.00

FIELD: Engineering
SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 7-25

Engineers by Subfield, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
	1445042	1388801	1252362	29420	3023	59967	1734	30304	56241	44494	4527	225	2674	98	1564
Engineers	100.00%	96.11%	86.66%	2.04%	0.21%	4.15%	0.12%	2.10%	3.89%	3.08%	0.31%	0.02%	0.19%	0.01%	0.11%
Aerospace	88491	85622	77557	1476	221	4107	74	2187	2869	2394	221	0	173	0	81
	100.00%	96.76%	87.64%	1.67%	0.25%	4.64%	0.08%	2.47%	3.24%	2.71%	0.25%	0.00%	0.20%	0.00%	0.09%
Agricultural	4505	4115	3845	62	4	122	0	82	390	353	23	7	7	0	0
	100.00%	91.34%	85.35%	1.38%	0.09%	2.71%	0.00%	1.82%	8.66%	7.84%	0.51%	0.16%	0.16%	0.00%	0.00%
Chemical	57502	54487	49349	947	70	3075	70	976	3015	2490	205	8	186	16	110
	100.00%	94.76%	85.82%	1.65%	0.12%	5.35%	0.12%	1.70%	5.24%	4.33%	0.36%	0.01%	0.32%	0.03%	0.19%
Civil	204035	198029	174802	4692	544	12206	378	5407	6006	5081	368	24	352	22	159
	100.00%	97.06%	85.67%	2.30%	0.27%	5.98%	0.19%	2.65%	2.94%	2.49%	0.18%	0.01%	0.17%	0.01%	0.08%
Electrical/Electronic	322874	306695	276662	7977	715	13830	324	7187	16179	13344	1442	14	681	19	679
	100.00%	94.99%	85.69%	2.47%	0.22%	4.28%	0.10%	2.23%	5.01%	4.13%	0.45%	0.00%	0.21%	0.01%	0.21%
Industrial	194322	174968	163026	4494	342	3432	199	3475	19354	17079	1116	94	396	30	539
	100.00%	90.04%	83.89%	2.31%	0.18%	1.77%	0.10%	1.79%	9.96%	8.79%	0.57%	0.05%	0.20%	0.02%	0.33%
Marine/Naval Architects	16682	16367	15011	343	49	393	16	555	315	278	19	6	9	0	3
	100.00%	98.11%	89.98%	2.06%	0.29%	2.36%	0.10%	3.33%	1.89%	1.67%	0.11%	0.04%	0.05%	0.00%	0.02%
Metallurgical/Materials	24539	23260	21397	463	19	893	49	439	1279	1095	80	21	41	0	42
	100.00%	94.79%	87.20%	1.89%	0.08%	3.64%	0.20%	1.79%	5.21%	4.46%	0.33%	0.09%	0.17%	0.00%	0.17%
Mechanical	197650	193579	177807	4354	360	7457	241	3360	4071	3472	304	20	182	5	88
	100.00%	97.94%	89.96%	2.20%	0.18%	3.77%	0.12%	1.70%	2.06%	1.76%	0.15%	0.01%	0.09%	0.00%	0.04%
Mining	10041	9700	9078	100	61	194	0	267	341	301	0	7	5	0	28
	100.00%	96.60%	90.41%	1.00%	0.61%	1.93%	0.00%	2.66%	3.40%	3.00%	0.00%	0.07%	0.05%	0.00%	0.28%
Nuclear	8240	8897	7549	128	22	597	20	181	343	298	10	0	18	0	17
	100.00%	96.29%	88.03%	1.39%	0.24%	6.46%	0.22%	1.96%	3.71%	3.23%	0.11%	0.00%	0.19%	0.00%	0.18%
Petroleum	23054	22235	20883	315	96	476	47	419	819	719	31	6	35	0	28
	100.00%	96.45%	90.58%	1.37%	0.42%	2.06%	0.20%	1.82%	3.55%	3.12%	0.13%	0.03%	0.15%	0.00%	0.12%
Sales	44069	42646	41407	335	23	399	12	470	1423	1279	52	7	11	0	74
	100.00%	96.77%	93.96%	0.76%	0.05%	0.91%	0.03%	1.07%	3.23%	2.90%	0.12%	0.02%	0.02!	0.00%	0.17%
Engineers, Misc.	248038	238210	213589	5734	497	12787	304	5299	9828	8321	656	12	57	6	255
	100.00%	96.04%	86.11%	2.31%	0.20%	5.16%	0.12%	2.14%	3.96%	3.35%	0.26%	0.00%	0.23.	0.00%	0.10%

FIELD: Engineering and Architecture

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 7-26

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN ENGINEERING AND ARCHITECTURE BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1984

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	%A	No.	%I	No.	%
General Engineering	18,069	516	2.9	1,751	9.7	90	0.5	457	2.5	437	2.4	771	4.3	86	0.5	16,318	90.3
Safety Engineering	570	20	3.5	60	10.5	3	.1	14	2.5	24	4.2	18	3.2	4	0.7	510	89.5
Fire Preven. Engineering	139	1	0.7	12	8.6	0	0.0	4	2.9	2	1.4	5	3.6	1	0.7	127	91.4
Materials Engineering	1,033	97	9.7	93	9.0	18	1.7	28	2.7	13	1.3	50	4.8	2	0.2	940	91.0
Landscape Architecture	646	76	11.8	29	4.5	6	0.9	6	0.9	7	1.1	12	1.9	4	0.6	617	95.5
Architecture	1,765	136	7.7	381	21.6	28	1.6	161	9.1	59	3.3	149	8.4	12	0.7	1,384	78.4
Civil Engineering	16,336	796	4.9	19,30	11.8	156	1.0	350	2.1	550	3.4	922	5.6	108	0.7	14,406	88.2
Environmental Engineering	1,985	176	8.9	219	11.2	21	1.1	471	2.1	52	2.6	120	6.0	6	0.3	1,766	89.0
Mechanical Engineering	11,699	492	4.2	1,459	12.5	101	0.9	311	2.7	231	2.0	882	7.5	35	0.3	10,240	87.5
Nuclear Engineering	2,689	119	4.4	290	10.8	19	0.7	35	1.3	25	0.9	223	8.3	7	0.3	2,399	89.2
Electrical Engineering	3,669	86	2.3	656	17.9	27	0.7	141	3.8	115	3.1	383	10.4	17	0.5	3,013	82.1
Electronics Engineering	22,517	780	3.5	2,620	11.6	160	0.7	748	3.3	626	2.8	1,174	5.2	72	0.3	19,897	88.4
Biomedical Engineering	240	26	10.8	19	7.6	4	1.6	3	1.2	3	1.2	13	5.2	0	0.0	231	92.4
Aerospace Engineering	8,564	345	4.0	582	6.8	44	0.5	171	2.0	172	2.0	224	2.6	15	0.2	7,982	93.2
Naval Architecture	1,253	60	4.8	187	14.9	16	1.3	49	3.9	23	1.8	114	9.1	1	0.1	1,066	85.1
Mining Engineering	482	14	2.9	30	6.2	1	0.2	0	0.0	5	1.0	23	4.8	2	0.4	452	93.8
Petroleum Engineering	503	35	7.0	41	8.2	2	0.4	6	1.2	18	3.6	12	2.4	5	1.0	462	91.8
Agricultural Engineering	450	11	2.4	21	4.7	2	0.4	1	0.2	8	1.8	9	2.0	3	0.7	429	95.3
Ceramic Engineering	54	7	13.0	2	3.7	0	0.0	0	0.0	0	0.0	2	3.7	0	0.0	52	96.3
Chemical Engineering	1,531	187	12.2	180	11.8	35	2.3	25	1.6	54	3.5	99	6.5	2	0.1	1,351	88.2
Welding Engineering	89	4	4.5	12	13.5	0	0.0	2	2.2	1	1.1	8	9.0	1	1.1	77	86.5
Industrial Engineering	2,779	201	7.2	281	10.1	38	1.4	71	2.6	73	2.6	129	4.6	8	0.3	2,498	89.9
TOTAL	96,416	4,185	4.3	10,855	11.3	774	0.8	2,526	2.6	2,498	2.6	5,342	5.5	391	0.4	85,659	88.8

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees Series 1973 thru 1984, Engineering Manpower Commission

TABLE 7-27

WOMEN AND MINORITY ENGINEERING TECHNOLOGY GRADUATES, BY LEVEL

		Engineering Technology				Industrial Technology			
		Associate		Bachelor's		Associate		Bachelor's	
		No.	%	No.	%	No.	%	No.	%
TOTAL	1973-74	17,537	100.0	4,830	100.0	7,389	100.0	1,613	100.0
	1974-75	16,978	100.0	5,867	100.0	5,816	100.0	2,042	100.0
	1975-76	16,685	100.0	5,721	100.0	6,362	100.0	1,358	100.0
	1976-77	15,123	100.0	6,337	100.0	5,346	100.0	1,345	100.0
	1977-78	16,099	100.0	7,164	100.0	6,660	100.0	2,202	100.0
	1978-79	14,622	100.0	6,609	100.0	5,306	100.0	2,105	100.0
	1979-80	15,817	100.0	7,567	100.0	5,937	100.0	2,481	100.0
	1980-81	17,975	100.0	8,469	100.0	7,340	100.0	3,188	100.0
	1981-82	17,198	100.0	8,325	100.0	6,514	100.0	3,110	100.0
	1982-83	19,329	100.0	9,222	100.0	*	*	*	*
	1983-84	18,432	100.0	10,182	100.0	*	*	*	*
WOMEN	1973-74	581	3.3	29	0.6	246	3.3	11	0.7
	1974-75	502	3.0	60	1.0	316	5.4	25	1.2
	1975-76	780	4.7	24	0.4	433	6.8	24	1.8
	1976-77	825	5.5	147	2.3	347	6.5	46	3.4
	1977-78	947	5.9	191	2.7	605	9.1	120	5.5
	1978-79	1,060	7.2	246	3.7	516	9.7	120	5.7
	1979-80	1,219	7.7	299	4.0	633	10.7	238	9.6
	1980-81	1,637	9.1	387	4.6	933	12.7	331	10.4
	1981-82	1,656	9.6	333	4.0	710	10.9	259	8.3
	1982-83	1,954	10.1	480	5.2	*	*	*	*
	1983-84	1,841	10.0	744	7.3	*	*	*	*
BLACK	1973-74	536	3.0	226	4.7	227	3.1	66	4.1
	1974-75	598	3.5	228	3.9	215	3.7	80	3.9
	1975-76	793	4.8	254	4.4	339	5.3	111	8.2
	1976-77	594	3.9	256	4.0	131	2.5	87	6.5
	1977-78	739	4.6	295	4.1	510	7.7	114	5.2
	1978-79	538	3.7	310	4.7	275	5.2	180	8.6
	1979-80	848	5.4	382	5.0	318	5.3	88	3.5
	1980-81	924	5.1	296	3.5	362	4.9	244	7.7
	1981-82	663	3.9	292	3.5	336	5.2	85	2.7
	1982-83	931	4.8	351	3.8	*	*	*	*
	1983-84	877	4.8	582	5.7	*	*	*	*
HISPANIC	1973-74	323	1.8	95	2.0	175	2.4	22	1.4
	1974-75	345	2.0	137	2.3	148	2.5	36	1.7
	1975-76	536	3.2	112	2.0	261	4.1	17	1.2
	1976-77	350	2.3	122	1.9	180	3.4	26	1.9
	1977-78	371	2.3	125	1.7	210	3.2	19	0.9
	1978-79	445	3.0	144	2.2	254	4.8	28	1.3
	1979-80	600	3.8	150	2.0	217	3.7	22	0.9
	1980-81	528	2.9	171	2.0	283	3.9	74	2.3
	1981-82	283	1.6	220	2.6	160	2.5	47	1.5
	1982-83	426	2.2	235	2.5	*	*	*	*
	1983-84	447	2.4	314	3.1	*	*	*	*
ASIAN	1973-74	137	0.8	89	1.8	29	0.3	16	1.0
	1974-75	146	0.9	92	1.6	30	0.5	14	0.7
	1975-76	183	1.1	74	1.3	113	1.8	5	0.4
	1976-77	144	1.0	93	1.5	31	0.6	36	2.7
	1977-78	194	1.2	114	1.6	91	1.4	10	0.5
	1978-79	197	1.3	211	3.2	49	0.9	14	0.7
	1979-80	219	1.4	145	1.9	58	1.0	17	0.7
	1980-81	256	1.4	258	3.0	108	1.5	17	0.5
	1981-82	286	1.7	199	2.4	101	1.6	24	0.8
	1982-83	361	1.9	259	2.8	*	*	*	*
	1983-84	343	1.9	381	3.7	*	*	*	*
AM. INDIAN	1973-74	47	0.3	10	0.2	91	1.2	1	0.1
	1974-75	71	0.4	8	0.1	79	1.3	2	0.1
	1975-76	28	0.2	11	0.2	19	0.3	3	0.2
	1976-77	25	0.2	9	0.1	6	0.1	6	0.4
	1977-78	85	0.5	12	0.2	23	0.3	2	0.1
	1978-79	28	0.2	11	0.2	39	0.7	11	0.5
	1979-80	20	0.1	8	0.1	11	0.2	10	0.4
	1980-81	37	0.2	14	0.2	78	1.0	3	0.1
	1981-82	46	0.3	18	0.2	30	0.5	33	1.1
	1982-83	58	0.3	10	0.1	*	*	*	*
	1983-84	65	0.4	14	0.1	*	*	*	*

*Data no longer collected in Industrial Technology.

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees, 1977-1984, Engineering Manpower Commission

TABLE 7-28

BACHELOR'S DEGREES AWARDED IN ENGINEERING TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP, 1977-1984

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	1977-82	1983	1984	1977-82	1983	1984	1977-82	1982	1984	1977-82	1983	1984	1977-82	1983	1984	1977-82	1983	1984
Aeronautical	660	49	189	6	1	4	14	0	2	6	0	2	15	0	1	4	0	0
Air Conditioning	186	0	0	2	0	0	7	0	0	5	0	0	3	0	0	1	0	0
Architectural	976	131	149	60	17	16	48	4	20	16	2	2	14	0	3	0	0	1
Automotive	231	0	12	0	0	0	15	0	0	3	0	0	7	0	1	0	0	0
Chemical	95	20	18	17	6	2	3	0	1	1	0	0	0	0	0	0	0	0
Civil	4,052	737	780	167	45	50	137	14	24	113	30	25	200	7	28	7	0	3
Computer	748	139	259	165	20	73	189	7	31	3	1	6	33	3	2	0	0	1
Construction	2,729	561	548	87	23	40	111	23	24	71	10	13	39	12	32	9	1	0
Drafting/Design	637	193	180	57	13	17	50	2	2	12	3	2	11	2	3	4	0	0
Electrical	6,858	1,753	1,678	122	71	102	234	61	70	91	36	48	119	40	75	4	2	2
Electromechanical	698	121	187	15	2	9	51	20	40	23	7	8	18	5	9	2	0	0
Electronic	9,534	2,050	2,207	161	86	107	494	132	187	205	68	85	267	120	129	14	2	4
Engineering Sci.	559	0	0	10	0	0	10	0	0	5	0	0	2	0	0	0	0	0
General	3,400	525	624	141	38	32	64	16	13	164	23	29	92	38	33	7	2	1
Industrial	3,139	708	966	249	45	167	89	23	71	43	12	23	22	7	14	2	0	0
Marine	312	55	48	6	1	0	4	2	0	3	3	0	12	2	3	0	0	0
Materials/Metals	356	173	0	14	0	0	3	0	0	13	0	0	9	0	0	1	0	0
Mechanical	7,570	1,803	1,980	189	73	74	250	46	75	113	30	60	152	22	37	11	1	1
Mineral/Mining	357	0	188	8	15	14	4	1	2	4	5	8	1	1	0	0	1	0
Nuclear	79	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Other	1,411	204	169	114	24	37	41	0	20	39	5	3	5	0	2	4	1	1
Total	44,453	9,222	10,182	1,603	480	744	1,771	351	582	932	235	314	1,020	259	372	72	10	14

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees, 1977-1984, Engineering Manpower Commission

TABLE 7-29

ASSOCIATE DEGREES AWARDED IN ENGINEERING TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP, 1977-1984

	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
CURRICULUM	1977-82	1983	1984	1977-82	1983	1984	1977-82	1983	1984	1977-82	1983	1984	1977-82	1983	1984	1977-82	1983	1984
Aeronautical	2,220	381	384	63	11	12	163	30	32	136	27	38	74	15	24	3	0	0
Air Conditioning	1,544	350	290	27	3	5	86	10	6	51	3	0	10	1	1	31	3	2
Architectural	4,957	909	935	705	134	179	205	47	45	77	19	24	31	7	4	10	2	1
Automotive	2,007	349	314	20	3	7	56	21	25	25	7	6	7	3	1	5	3	0
Chemical	1,625	257	290	573	91	118	132	22	33	17	5	10	32	5	4	0	0	2
Civil	7,525	1,271	1,078	543	146	84	231	43	45	163	16	41	78	15	14	16	2	2
Computer	5,885	1,215	1,309	1,554	402	380	474	27	64	162	23	23	52	34	19	13	3	6
Construction	2,942	368	304	116	20	16	85	18	15	42	4	8	10	4	1	6	3	2
Drafting/Design	3,827	685	675	535	135	122	217	48	33	136	14	13	69	10	10	24	6	2
Electrical	12,264	3,241	2,864	345	183	130	394	146	127	152	52	53	55	34	30	17	2	6
Electromechanical	2,329	371	389	87	18	25	134	33	33	101	10	11	74	21	2	14	18	1
Electronic	21,728	4,323	4,430	798	259	274	1,196	100	239	644	45	126	258	32	156	49	18	19
Engineering Sci.	7,434	212	164	504	25	22	186	290	5	545	0	0	219	3	2	23	0	1
General	880	185	179	68	13	13	25	7	1	24	6	4	87	13	6	5	0	0
Industrial	3,121	859	839	344	116	117	181	32	31	56	6	12	16	3	10	2	3	1
Marine	10	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials/Metals	436	0	0	24	0	0	3	0	0	7	0	0	0	0	0	0	0	0
Mechanical	12,244	3,018	2,668	727	259	198	384	100	79	186	45	57	101	32	32	21	8	7
Mineral/Mining	781	271	269	33	18	15	9	4	3	3	3	2	1	0	0	0	2	2
Nuclear	225	37	44	28	4	5	10	1	1	1	0	0	0	0	0	0	0	0
Other	2,004	1,020	1,005	236	115	119	122	50	60	47	20	19	18	27	27	2	2	11
TOTAL	96,834	19,329	18,432	7,344	1,954	1,841	4,306	931	877	2,577	426	447	1,296	361	343	241	58	69

FIELD: Engineering Technology

SOURCE: Engineering and Technology Enrollments Series 1974-1984, Engineering Manpower Commission

TABLE 7-30

ENGINEERING TECHNOLOGY ENROLLMENTS OF WOMEN AND MINORITIES

	ASSOCIATE DEGREE & PRE-ENGINEERING PROGRAMS					BACHELOR OF TECHNOLOGY PROGRAMS						
				Total						Total		All
	1st Year	2nd Year	Other Years	Full Time	Part Time	1st Year	2nd Year	3rd Year	4th Year	Full Time	Part Time	Post Bacc.
ALL STUDENTS												
Fall 1974	61,372	32,517	10,633	104,522	42,833	4,506	3,398	6,353	5,737	19,994	4,848	198
Fall 1976	55,792	31,771	1,901	89,464	36,460	7,134	5,764	8,467	7,770	29,135	6,543	483
Fall 1977	56,171	31,874	1,056	89,101	82,908	9,506	7,310	10,417	10,169	37,402	9,571	489
Fall 1978	44,934	24,035	733	69,702	34,589	8,420	6,816	9,881	9,911	35,028	8,400	482
Fall 1979	47,517	24,988	816	73,321	41,284	8,680	6,547	9,902	9,842	34,971	9,982	294
Fall 1980	67,971	35,434	1,188	104,593	54,549	10,998	8,543	12,271	12,132	43,944	12,767	556
Fall 1981	55,202	32,461	872	88,535	45,299	10,691	8,313	13,339	13,020	45,363	11,409	546
Fall 1982	51,513	29,436	797	81,748	45,095	7,826	7,369	11,419	11,604	38,118	10,696	376
Fall 1983	36,866	23,618	925	61,409	37,229	16,166	10,181	11,818	12,875	51,040	13,252	296
Fall 1984	29,211	20,053	1,165	50,429	31,811	17,595	11,663	15,561	15,911	60,730	14,640	287
WOMEN												
Fall 1974	2,745	1,207	545	4,768	3,055	189	131	151	142	630	189	14
Fall 1976	3,819	2,117	68	6,004	3,225	426	426	365	245	1,162	301	55
Fall 1977	4,877	2,499	54	7,430	2,411	587	464	549	354	1,954	287	29
Fall 1978	4,333	1,918	38	6,359	2,500	681	564	629	502	2,376	533	40
Fall 1979	5,621	2,428	180	8,229	4,923	800	533	595	447	2,375	508	82
Fall 1980	8,754	3,795	371	12,920	7,594	1,085	837	947	834	3,703	776	60
Fall 1981	7,838	3,970	68	11,876	8,059	1,360	978	1,158	1,067	4,563	766	62
Fall 1982	6,472	3,503	45	10,020	5,389	762	624	848	736	2,970	599	29
Fall 1983	4,296	2,701	38	7,035	4,307	1,284	796	890	960	3,930	964	42
Fall 1984	3,640	2,295	90	6,025	3,375	2,211	1,399	1,634	1,534	6,758	1,477	71
BLACKS												
Fall 1974	2,723	1,132	1,472	5,815	2,406	260	196	249	199	1,048	158	0
Fall 1976	3,917	2,164	159	6,240	3,186	646	536	511	409	2,102	386	52
Fall 1977	4,347	1,794	78	6,219	2,201	968	776	875	615	3,234	320	55
Fall 1978	3,892	1,570	33	5,495	2,170	644	538	675	608	2,465	353	23
Fall 1979	4,101	1,601	48	5,750	2,726	660	473	537	447	2,117	323	8
Fall 1980	5,888	2,191	60	8,139	3,762	1,071	752	896	716	3,435	552	20
Fall 1981	4,519	1,834	67	6,409	3,860	1,209	886	978	905	3,978	538	39
Fall 1982	4,567	1,795	22	6,384	2,922	818	707	670	542	2,737	483	7
Fall 1983	3,512	1,479	24	5,014	2,716	2,544	1,237	933	760	5,474	889	15
Fall 1984	2,611	1,273	10	3,894	2,245	2,588	1,400	1,310	1,038	5,336	1,037	13
HISPANICS												
Fall 1976	2,290	1,418	67	3,775	1,667	238	185	215	173	811	255	8
Fall 1977	2,908	1,404	6	4,318	1,414	262	212	304	236	1,014	105	22
Fall 1978	2,004	866	9	2,879	1,318	182	150	343	289	964	234	6
Fall 1979	1,214	502	29	1,745	857	184	137	245	228	792	267	5
Fall 1980	2,586	1,236	51	3,873	1,291	151	146	280	228	805	332	15
Fall 1981	1,668	797	8	2,473	1,064	213	146	270	268	897	465	5
Fall 1982	2,015	815	34	2,864	1,073	216	170	263	236	885	400	8
Fall 1983	1,475	569	28	2,072	803	730	425	405	365	1,925	515	11
Fall 1984	1,026	563	30	1,619	792	918	451	543	489	2,401	523	3
AMERICAN IN.												
Fall 1976	576	238	11	825	157	49	31	31	22	133	6	0
Fall 1977	408	175	2	585	137	42	24	35	39	140	40	0
Fall 1978	342	141	3	483	138	45	35	36	34	150	2	0
Fall 1979	335	133	5	473	124	32	24	39	36	131	18	0
Fall 1980	412	151	5	568	160	48	27	33	42	150	15	0
Fall 1981	420	174	3	597	152	42	16	23	31	112	39	1
Fall 1982	245	119	3	367	102	32	21	32	37	122	30	0
Fall 1983	311	121	3	435	92	105	71	64	84	324	28	2
Fall 1984	258	130	5	393	68	65	50	51	55	221	31	0
ASIAN-PACIFIC												
Fall 1976	685	335	33	1,053	395	84	64	80	64	292	68	3
Fall 1977	736	373	6	1,115	528	82	48	129	92	351	36	9
Fall 1978	791	364	6	1,161	449	97	71	126	108	402	29	6
Fall 1979	718	349	18	1,085	298	151	104	214	175	644	111	5
Fall 1980	981	543	35	1,559	541	127	94	228	232	681	110	20
Fall 1981	1,015	557	34	1,606	650	192	130	182	285	789	216	6
Fall 1982	1,048	544	31	1,623	500	197	224	286	265	972	236	23
Fall 1983	807	421	38	1,266	560	420	323	317	423	1,483	401	26
Fall 1984	641	447	21	1,109	467	432	336	478	474	1,720	436	5

SOURCE: National Center for Education Statistics, Unpublished

TABLE 7-31

ASSOCIATE DEGREES AND OTHER AWARDS BASED ON ORGANIZED OCCUPATIONAL CURRICULUMS, 1982-83

DISCIPLINE DIVISION & SPECIALTY	LESS THAN ONE YEAR			AT LEAST ONE BUT < FOUR			ASSOCIATE DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
TOTAL, ALL DISCIPLINE DIVISIONS	**28,044**	**12,383**	**15,661**	**114,989**	**58,505**	**56,484**	**456,214**	**206,914**	**249,300**
Agribusiness & Ag Production	437	379	58	2,366	1,764	602	4,732	3,375	1,357
Agricultural Sciences	16	8	8	812	522	290	1,459	635	824
Renewable Natural Resources	51	49	2	189	154	35	1,454	1,157	297
Architecture & Environmental Design	22	0	22	210	26	184	1,454	310	1,144
Area and Ethnic Studies	34	13	21	3	2	1	21	9	12
Business & Management	1,323	731	592	8,257	5,702	2,555	49,619	24,589	25,030
Business & Office	4,691	594	4,097	18,227	2,122	16,105	51,353	12,813	38,540
Marketing & Distribution	969	302	667	2,326	845	1,481	14,449	4,959	9,490
Communications	7	3	4	135	65	70	2,020	1,008	1,012
Communication Technology	8	7	1	289	186	103	1,814	1,095	719
Computer and Information Sciences	765	440	325	1,697	767	930	9,670	4,784	4,886
Consumer Pers. Services	1,107	432	675	3,295	446	2,849	858	369	489
Education	44	5	39	354	71	283	7,520	2,351	5,169
Engineering	9	5	4	85	81	4	3,207	2,857	350
Engineering & Related Technologies	1,534	1,367	167	13,137	11,992	1,145	46,404	41,773	4,631
Arch Design & Construction	4	4	0	60	46	14	1,292	1,056	236
Civil Technology	8	8	0	72	65	7	1,781	1,581	200
Drafting & Design Technology	45	36	9	484	372	112	2,021	1,607	414
Computer Technology	145	84	61	164	110	54	2,585	2,055	530
Electrical Technology	18	3	15	344	326	18	2,354	2,211	143
Electronic Technology	284	254	30	5,936	5,495	441	13,619	12,575	1,044
Aeronautical Technology	0	0	0	325	316	9	1,510	1,445	65
Automotive Technology	352	350	2	649	634	15	1,585	1,543	42
Industrial Technology	15	14	1	169	153	16	1,524	1,355	169
Technologies, Other	563	614	49	4,934	4,475	459	18,133	16,345	1,788
Foreign Languages	0	0	0	39	4	35	342	167	175
Allied Health	8,817	1,695	7,122	24,515	2,761	21,754	25,866	4,659	21,207
Radiograph Med Tect	7	0	7	167	41	126	2,856	696	2,160
Medical Lab Technology	0	0	0	105	12	93	2,699	476	2,223
Allied Health, Other	8,810	1,695	7,115	24,243	2,708	21,535	20,311	3,487	16,824
Health Sciences	262	118	144	669	115	554	39,883	2,985	36,898
Nursing	46	1	45	370	19	351	37,057	2,507	34,550
Health Sciences, Other	216	117	99	299	96	203	2,826	478	2,348
Home Economics	1	0	1	302	29	273	1,045	108	937
Vocational Home Economics	964	305	659	3,452	864	2,588	7,999	2,157	5,842
Law	93	66	27	452	54	398	1,742	267	1,475
Letters	77	30	47	15	2	13	618	220	398
Liberal/General Studies	81	33	48	675	327	348	107,625	48,523	59,102
Library & Archival Science	4	0	4	83	5	78	218	29	189
Life Sciences	0	0	0	105	84	21	981	473	508
Mathematics	2	2	0	2	2	0	777	480	297
Military Science & Technology	0	0	0	0	0	0	88	86	2
Multi-Interdisciplinary Studies	62	22	40	117	93	24	10,247	4,734	5,513
Parks & Recreation	2	0	2	120	76	44	1,020	466	554
Philosophy and Religion	1	0	1	45	34	11	178	110	68
Theology	51	22	29	639	348	291	671	370	301
Physical Sciences	23	10	13	2	2	0	1,665	1,102	563
Science Technology	1	1	0	75	58	17	1,438	911	527
Psychology	0	0	0	10	5	5	973	338	635
Protective Services	1,018	852	166	1,674	1,305	369	12,989	9,818	3,171
Public Affairs	51	30	21	284	105	179	2,683	568	2,115
Social Sciences4	4	4	0	41	23	18	2,755	1,315	1,440
Construction Trades	599	573	26	5,305	4,884	421	2,382	2,208	174
Mechanics & Repairers	2,380	2,115	265	13,805	13,277	528	8,636	8,268	368
Precision Production	1,731	1,506	255	9,767	8,449	1,318	8,570	6,086	2,484
Transp & Material Moving	742	635	107	634	454	180	1,600	1,233	367
Visual and Performing Arts	61	29	32	780	400	380	6,365	2,400	3,965

SOURCE: Engineering and Technology Degrees 1977-1984, Engineering Manpower Commission

TABLE 7-32

CERTIFICATES AWARDED IN ENGINEERING AND INDUSTRIAL TECHNOLOGY BY SEX AND MINORITY GROUP, 1977-1984

	ENGINEERING TECHNOLOGY								INDUSTRIAL TECHNOLOGY*					
	1977	1978	1979	1980	1981	1982	1983	1984	1977	1978	1979	1980	1981	1982
Total	**614**	**661**	**430**	**533**	**509**	**402**	**526**	**575**	**1,246**	**1,584**	**731**	**406**	**1,471**	**1,502**
Women	18	55	13	41	79	77	23	39	28	65	39	41	137	143
Blacks	21	16	27	96	22	30	49	21	34	101	43	22	101	118
Hispanics	2	12	14	24	8	11	10	10	18	78	33	13	103	32
Asian/Pacific	2	4	2	13	4	60	33	3	4	36		4	11	7
American Indian	10	10	2	4	6	1	6	1	34	131		5	9	16

* Data not collected after 1982.

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 7-33

Science, Engineering and Related Technicians by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Technicians															
Biological	46484	26901	23059	1708	144	693	36	1264	19503	16393	1521	47	555	12	975
	100.00%	57.97%	49.69%	3.68%	0.31%	1.49%	0.08%	2.72%	42.03%	35.33%	3.28%	0.10%	1.20%	0.03%	2.10%
Chemical	73423	56768	48437	4497	153	1455	58	2168	16655	13570	1838	78	470	15	684
	100.00%	77.32%	65.97%	6.12%	0.21%	1.98%	0.08%	2.95%	22.68%	18.48%	2.50%	0.11%	0.64%	0.02%	0.93%
Science, Misc.	73033	48724	42389	2474	185	1512	73	2091	24309	19914	2301	118	733	32	1211
	100.00%	66.72%	58.04%	3.39%	0.25%	2.07%	0.10%	2.86%	33.28%	27.27%	3.15%	0.16%	1.00%	0.04%	1.66%
Electrical/Electronic	266184	235581	204679	12442	893	7974	341	9852	30603	23362	3863	146	1265	44	2123
	100.00%	88.50%	76.87%	4.67%	0.34%	3.00%	0.13%	3.70%	11.50%	8.78%	1.38%	0.05%	0.48%	0.02%	0.80%
Industrial Engineering	10644	8404	7638	400	20	46	12	288	2240	1945	163	7	25	0	100
	100.00%	78.96%	71.76%	3.76%	0.19%	0.43%	0.11%	2.71%	21.04%	18.27%	1.53%	0.07%	0.23%	0.00%	0.94%
Mechanical Engineering	15592	14588	13108	637	35	321	29	458	1004	838	86	0	8	0	72
	100.00%	93.56%	84.07%	4.09%	0.22%	2.06%	0.19%	2.94%	6.44%	5.37%	0.55%	0.00%	0.05%	0.00%	0.46%
Engineering, Misc.	272034	207139	186462	9127	716	3951	197	6686	64895	53938	6054	166	2094	104	2539
	100.00%	76.14%	68.54%	3.36%	0.26%	1.45%	0.07%	2.46%	23.86%	19.83%	2.23%	0.06%	0.77%	0.04%	0.93%
Surveying/Mapping	53054	48572	44060	1398	635	414	21	2044	4522	3752	456	63	89	0	162
	100.00%	91.48%	83.08%	2.63%	1.20%	0.78%	0.04%	3.85%	8.52%	7.07%	0.86%	0.12%	0.17%	0.00%	0.31%
Technicians, Misc.	338002	237690	201792	13456	840	12637	408	8557	100312	81030	10717	489	4340	145	3591
	100.00%	70.32%	59.70%	3.98%	0.25%	3.74%	0.12%	2.53%	29.68%	23.97%	3.17%	0.14%	1.28%	0.04%	1.06%
Drafting Occupations	329467	274659	237890	12520	1319	8324	302	14304	54808	47509	2631	257	1832	52	2527
	100.00%	83.36%	72.20%	3.80%	0.40%	2.53%	0.09%	4.34%	16.64%	14.42%	0.80%	0.08%	0.56%	0.02%	0.77%

CHAPTER 8

AGRICULTURAL, BIOLOGICAL, MEDICAL AND HEALTH SCIENCES

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FIELD: Agricultural & Biological Sciences

SOURCE: Tables throughout Professional Women and Minorities

TABLE 8-1
SUMMARY TABLE

Proportion of Women in the Agricultural & Biological Sciences

	Agricultural		Biological	
Degrees Granted	**1960-76**	**1983**	**1960-76**	**1982**
Bachelor's	7.9	39.5	30.1	46.1
Master's	7.4	29.5	29.5	43.6
Doctorates - 1984	3.2	14.0	18.5	31.3
General Labor Force	**1972**	**1985**	**1972**	**1985**
	5.5	26.3	28.6	33.3
Doctoral Labor Force	**1973**	**1983**	**1973**	**1983**
	1.3	4.5	13.6	19.2
Academic Labor Force	**1974-75**	**1985**	**1974-75**	**1985**
Doctoral (1983)	1.3	4.0	14.9	20.8
Total	12.1	14.9	19.7	36.9
Federal Labor Force	**1976**	**1984**	**1976**	**1984**
	0.6	8.1	16.0	23.1

TABLE 8-2
SUMMARY TABLE

Proportion of Minorities in the Life Sciences - Agricultural & Biological Sciences

	Blacks		American Indian		Asian/ Pacific		Hispanic	
	Ag.	Biol.	Ag.	Biol.	Ag.	Biol.	Ag.	Biol.
Degrees Granted								
Bachelor's	0.3	5.3	0.4	0.3	1.4	3.4	1.1	2.6
Master's	1.8	2.9	0.2	0.3	1.7	2.4	1.6	1.2
Doctorates, 1984	1.8	1.3	0.1	0.3	2.2	4.1	1.0	1.1
General Labor Force, 1985	0.8	1.6	0.3	0.3	2.6	5.4	4.3	2.7
Doctoral Labor Force, 1983	0.5	1.1	0.2	0.1	5.6	7.3	1.7	1.1
Federal Labor Force, 1984	3.2	4.3	1.2	0.7	1.4	3.3	2.5	1.8

FIELD: Agriculture Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 8-3

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1977			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Agricultural Sciences, Subtotal	13,662	230	1.7	5,095	312	6.1	5,194	588	11.3	1,172	151	12.9	1,155	162	14.0
Agricultural Economics[1]	536	5	0.9	829	21	2.5	819	61	7.5	157	18	11.5	158	29	18.4
Animal Breeding & Genetics[2]										25	4	16.0	28	5	17.9
Animal Husbandry[3]	2,460	35	1.3	116	3	2.6	113	6	5.3						
Animal Nutrition[5]				599	34	5.7	614	63	10.3	56	6	10.7	71	7	9.9
Animal Sciences, Other[2]										92	9	9.8	90	15	16.7
Agronomy	3,804	27	0.7	685	13	1.9	762	58	7.6	149	11	7.4	137	12	8.8
Plant Breeding & Genetics[2]										71	13	18.3	78	8	10.3
Plant Pathology[2]										92	19	20.7	57	8	14.0
Phytopathology[3]	1,949	62	3.2	458	34	7.4	508	87	17.1						
Plant Sciences, Other[2]										16	1	6.3	20	2	10.0
Food Sciences[5]	253	24	10.3	502	92	18.3	540	129	23.9	141	38	27.0	113	32	28.3
Soil Sciences[6]	217	6	2.8	434	6	1.4	420	36	8.6	85	7	8.2	99	4	4.0
Horticulture Science	1,624	37	2.3	283	13	4.6	380	54	14.2	72	9	12.5	66	21	31.8
Fisheries Sciences[7]										36	6	16.7	45	5	11.1
Fish and Wildlife[7]	501	6	1.2	288	73	25.3	331	27	8.2						
Wildlife Management[7]										31	1	3.2	31	3	9.7
Forestry Science	1,031	1	0.1	387	5	1.3	428	24	5.6	90	4	4.4	94	5	5.3
Agriculture, General[8]	175	2	1.1	32	2	6.3	27	4	14.8	7	0	0.0	1	0	0.0
Agriculture, Other	1,132	25	2.2	486	16	3.3	431	39	9.1	52	5	9.6	67	6	9.0

1 Added in 1971. 2 Added in 1983. 3 Dropped in 1983. 4 "Animal Sciences" added in 1973. 5 "Food Science & Technoogy" added in 1973. "Technology" dropped in 1983.

6 Added in 1968 as "Range Management." Changed to "Soils & Soil Science" in 1971, and to "Soil Sciences" in 1983.

Previous cases under "Range Management" were converted to "Agriculture, Other. 7 "Fish & Wildlife" separated to "Fisheries Science" and "Wildlife Management" in 1983.

8 Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General" classification of their respective fields.

FIELD: Agricultural Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 8-4

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER's		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	93,274	1,657	1.8	14,111	262	1.9
1960-61 thru 1969-70	59,136	2,001	3.4	13,009	580	4.5
1970-71	10,884	517	4.8	2,167	135	6.2
1971-72	13,560	740	5.5	2,691	190	7.1
1972-73	14,819	1,104	7.5	2,822	222	7.9
1973-74	16,303	1,576	9.7	2,939	289	9.8
1974-75	17,573	2,472	14.1	3,076	364	11.8
1975-76	19,460	3,570	18.3	3,351	478	14.3
1976-77	21,467	4,777	22.3	3,724	547	14.7
1977-78	22,724	5,594	24.6	4,036	756	18.7
1978-79	23,247	6,303	27.1	4,007	808	20.2
1979-80	22,903	6,787	29.6	3,987	894	22.4
1980-81	21,886	6,732	30.8	4,003	942	23.5
1981-82	21,029	6,586	31.3	4,163	1,049	25.2
1982-83	20,909	6,824	32.6	4,254	1,125	25.6
TOTAL	399,174	57,240	14.3	72,340	8,641	11.9

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

Table 8-5

DOCTORAL DEGREES BY SEX, 1920-1984

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	4,772	60	1.3
FY 1960 thru FY 1969	5,119	79	1.5
FY 1970 thru FY 1972	2,770	87	3.1
FY 1973	953	37	3.9
FY 1974	1,010	48	4.8
FY 1975	1,066	46	4.3
FY 1976	951	54	5.7
FY 1977	924	63	6.8
FY 1978	1,012	70	6.9
FY 1979	1,008	91	9.0
FY 1980	1,072	109	10.2
FY 1981	1,150	147	12.8
FY 1982	1,130	171	15.1
FY 1983	1,172	151	12.9
FY 1984	1,155	162	14.0
TOTAL	25,264	1,375	5.4

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Biological Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 8-6

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Biological Sciences	48,689	7,278	14.9	16,683	3,671	22.0	17,173	4,781	27.8	3,732	1,231	33.0	3,872	1,213	31.3
Biochemistry	9,600	1,519	15.8	3,086	699	22.7	3,173	848	26.7	646	194	30.0	606	191	31.5
Biophysics	1,126	101	9.0	611	70	11.5	541	77	14.2	88	16	18.2	90	21	23.3
Bacteriology[9]										10	4	40.0	12	4	16.8
Genetics	2,429	329	13.5	692	193	27.9	757	278	36.7						
Genetics, Plants[1]										19	5	26.3	20	4	20.0
Genetics, Human/Animal[1]										95	24	25.3	82	39	47.6
Pathology	691	56	8.1	418	61	14.6	486	130	26.8						
Pathology, Plant[2]										29	8	27.6	30	5	16.7
Pathology, Human/Animal[2]										95	43	45.3	87	22	25.3
Physiology	2,349	350	14.9												
Physiology, Plant[3]	877	82	9.4	341	66	19.4	219	51	23.3	67	24	35.8	70	23	23.9
Physiology, Human/Animal[3]	2,686	396	14.7	1,605	291	18.1	1,602	358	22.4	243	68	28.0	237	59	24.9
Botany, Other[4]	5,072	815	16.1	885	182	20.6	726	206	28.4	116	39	33.6	126	38	30.2
Anatomy	1,770	333	18.8	617	139	22.5	759	243	32.0	104	36	34.6	102	37	36.3
Biometrics & Biostatistics[5]	329	54	16.4	204	42	20.6	237	62	26.2	45	22	48.9	49	18	36.7
Cell Biology										119	41	34.5	122	48	39.3
Ecology	946	60	6.3	825	89	10.8	882	175	19.8	183	37	20.2	202	45	22.3
Embryology[6]	339	104	30.7	109	33	30.3	77	31	40.3	13	7	53.8	15	8	53.3
Cytology[5]							41	18	43.9						
Endocrinology										28	14	50.0	30	11	36.7
Entomology[7]	3,241	152	4.7	824	64	7.7	781	84	10.8	141	20	14.9	156	29	18.6
Immunology[8]				385	113	29.4	650	235	36.2	154	66	42.9	133	52	39.1
Molecular Biology[9]	447	120	26.8	690	203	29.4	903	296	32.8	225	76	33.8	275	103	37.5
Microbiology[10]	6,604	1,144	17.3	1,795	475	26.5	1,738	527	30.3	308	117	37.9	344	120	34.9
Neurosciences[11]							117	38	32.5	134	49	36.7	144	43	29.9
Nutritional Sciences[7]	543	154	28.4	166	88	53.0	505	315	62.4	111	72	64.9	109	68	62.4
Parasitology[4]				80	11	13.8	88	20	22.7	9	0	0.0	30	4	13.3
Toxicology[5]										60	16	26.7	97	25	25.8
Human/Animal Pharmacology[12]										217	71	32.7	237	60	25.3
Hydrobiology[13]	216	12	5.6	62	5	8.1	13	8	30.8						
Zoology, Other[14]	7,366	1,056	14.4	1,372	265	19.3	1,102	245	22.2	192	63	32.8	158	42	26.6
Biological Sciences, General[14]	1,024	194	18.9	921	266	28.9	992	299	30.1	174	60	34.5	192	56	29.2
Biological Sciences, Other	1,034	247	23.9	995	316	31.8	784	244	31.1	106	39	36.8	117	38	32.5

[1] Broken out to "Plant Genetics" and "Human and Animal Genetics" in 1983. [2] Broken out to "Plant Pathology" and "Human and Animal Pathology" in 1983. [3] In 1962, "Physiology" was broken out into "Animal Physiology" and "Plant Physiology". [4] "Botany" until 1983, when it became "Botany, Other". [5] Added in 1983. [6] Added in 1962. [7] Added in 1973. [8] Added in 1968. [9] Originally specified as "Microbiology"; then "microbiology and Bacteriology in 1970. "Bacteriology" was added in 1970. In 1983, they were broken out separately. [10] Added in 1982. [11] Dropped in 1960. [12] Added in 1976 with Dietetics. Became "Nutritional Sciences" in 1983. [13] Dropped in 1980. [14] Became "Zoology, Other" in 1983. [15] Subfields were not specified until 1958. [16] Dropped in 1983.

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 8-7

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER's		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	159,518	41,140	25.8	25,843	5,432	21.0
1960-61 thru 1969-70	255,783	72,606	28.4	41,177	11,404	27.7
1970-71	35,411	10,414	29.4	5,756	1,943	33.8
1971-72	37,638	11,147	29.6	6,126	2,027	33.1
1972-73	42,672	12,824	30.0	6,294	1,924	30.6
1973-74	48,856	15,378	31.5	6,581	2,014	30.6
1974-75	52,236	17,416	33.3	6,591	1,976	30.1
1975-76	54,913	19,119	34.8	6,621	2,103	31.8
1976-77	53,605	19,387	36.2	7,114	2,396	33.7
1977-78	52,213	20,223	38.7	6,851	2,430	35.5
1978-79	49,576	20,105	40.6	6,879	2,592	37.7
1979-80	47,111	19,976	42.4	6,536	2,425	37.1
1980-81	43,216	19,067	44.1	5,978	2,324	38.9
1981-82	41,369	18,885	45.7	5,874	2,448	41.7
1982-83	39,982	18,418	46.1	5,696	2,482	43.6
TOTAL	1,014,099	336,096	33.1	149,917	45,920	30.6

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 8-8

DOCTORAL DEGREES BY SEX, 1920-1984

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	16,537	2,428	14.7
FY 1960 thru FY 1969	13,933	2,026	14.5
FY 1970 thru FY 1972	8,052	1,386	17.2
FY 1973	2,743	590	21.5
FY 1974	3,190	687	21.5
FY 1975	3,247	769	23.7
FY 1976	3,245	752	23.1
FY 1977	3,172	729	23.0
FY 1978	3,192	815	25.5
FY 1979	3,317	889	26.8
FY 1980	3,411	955	28.0
FY 1981	3,397	986	29.0
FY 1982	3,502	1,033	29.5
FY 1983°	3,732	1,231	33.0
FY 1984	3,872	1,213	31.3
TOTAL	78,542	16,489	21.0

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

°In 1983, definitions were changed to add "biomedical" sciences to the biological science group. Thus, the totals for 1983 and later are not completely comparable with previous years.

FIELD: Life Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1984 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1985

TABLE 8-9

NUMBER OF Ph.D. RECIPIENTS BY TYPE OF CITIZENSHIP, 1960-1984

BIOSCIENCES			FOREIGN			
YEAR	TOTAL	U.S.	TOTAL	Immi-grants	Non-Immi-grants	Citizen-ship not Known
1960	1,246	1,048	188	40	148	10
1961	1,244	1,020	208	35	173	16
1962	1,397	1,167	215	14	201	15
1963	1,510	1,252	246	37	209	12
1964	1,702	1,376	293	43	250	33
1965	1,963	1,583	360	53	307	20
1966	2,135	1,740	365	52	313	30
1967	2,361	1,947	378	80	298	36
1968	2,822	2,324	470	111	359	28
1969	3,084	2,586	463	123	340	35
1970	3,359	2,813	522	161	361	24
1971	3,652	3,063	511	199	312	78
1972	3,663	3,049	535	225	310	79
1973	3,731	3,085	570	251	319	76
1974	3,585	2,829	587	217	370	169
1975	3,636	3,024	532	202	330	80
1976	3,692	3,090	500	170	330	102
1977	3,484	2,909	479	160	319	96
1978	3,508	2,988	432	142	290	88
1979	3,640	3,119	429	132	297	92
1980	3,411	2,944	392	126	266	75
1981	3,397	2,948	363	111	252	86
1982	3,502	2,973	417	105	312	112
1983	3,732	3,202	437	115	322	93
1984	3,872	3,280	473	113	360	119
AGRICULTURE SCIENCES						
1960	414	306	107	16	91	1
1961	438	338	98	6	92	2
1962	470	344	126	14	112	
1963	466	365	97	7	90	4
1964	517	366	149	14	135	2
1965	576	380	189	17	172	7
1966	576	379	186	11	175	11
1967	606	408	195	13	182	3
1968	681	450	225	29	196	6
1969	720	488	229	28	201	3
1970	804	564	237	38	199	3
1971	902	597	302	65	237	3
1972	853	533	316	85	231	4
1973	853	543	308	75	233	3
1974	820	461	336	65	271	23
1975	904	563	336	70	266	5
1976	788	491	281	37	244	8
1977	782	488	283	27	256	11
1978	853	531	310	43	267	12
1979	855	543	294	29	265	18
1980	1,072	666	391	42	349	15
1981	1,150	685	434	46	388	31
1982	1,130	741	364	32	332	25
1983	1,172	728	411	45	366	33
1984	1,155	698	427	44	383	30

FIELD: Life Sciences

SOURCE: The Technological Marketplace: Supply and Demand for Scientists and Engineers, Scientific Manpower Commission, 1985; Data Source: National Center for Education Statistics

TABLE 8-10

DEGREES IN AGRICULTURAL AND BIOLOGICAL SCIENCES 1970-1983 PROJECTED TO 1989

	BACHELOR'S				MASTER'S				Ph. D.			
	Agriculture/ Nat. Resources		Biological Sciences		Agriculture/ Nat. Resources		Biological Sciences		Agriculture Nat. Resources		Biological Sciences	
Year	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
1970	12,382	4.1	37,031	28.0	2,197	6.3	5,800	31.5	1,004	2.8	3,289	14.3
1971	12,672	4.2	35,743	29.1	2,457	5.9	5,728	33.5	1,086	2.9	3,654	16.3
1972	13,516	5.5	37,293	29.4	2,680	7.1	6,101	33.0	971	2.7	3,653	17.0
1973	14,756	7.4	42,233	29.8	2,807	7.8	6,263	30.5	1,059	2.6	3,636	19.5
1974	16,253	9.7	48,340	31.2	2,928	9.8	6,552	30.5	930	3.5	3,439	20.3
1975	17,528	14.1	51,741	33.1	3,067	11.9	6,550	30.0	991	3.3	3,384	22.0
1976	19,402	18.3	54,275	34.6	3,340	14.3	6,582	31.7	928	6.6	3,392	21.5
1977	21,467	22.3	53,605	36.2	3,724	14.7	7,114	33.7	893	6.9	3,397	21.4
1978	22,650	24.6	51,502	38.4	4,023	18.8	6,806	35.4	971	6.4	3,309	24.1
1979	23,247	27.1	49,576	40.6	4,007	20.2	6,879	37.7	950	7.7	3,548	25.6
1980	22,903	29.6	47,111	42.4	3,987	22.4	6,536	37.1	991	11.3	3,638	26.0
1981	21,886	30.8	43,216	44.1	4,003	23.5	5,978	38.9	1,067	11.9	3,718	28.3
1982	21,029	31.3	41,639	45.4	4,163	25.2	5,874	41.7	1,079	14.3	3,743	29.1
1983	20,909	32.6	39,982	46.1	4,254	26.5	5,696	43.6	1,149	12.6	3,341	32.2
					PROJECTED*							
1981	25,740	26.4	55,890	38.7	4,370	24.9	6,880	41.0	1,100	6.3	3,510	25.1
1982	26,430	26.3	57,480	39.8	4,570	25.2	7,020	41.0	1,120	6.3	3,480	24.4
1983	27,080	26.6	57,570	39.8	4,760	25.8	7,120	41.6	1,110	6.3	3,350	24.8
1984	27,550	27.2	57,080	39.9	4,850	24.9	7,160	42.2	1,100	6.4	3,250	25.2
1985	27,800	27.6	56,140	40.1	4,990	24.2	7,170	42.0	1,080	6.5	3,140	25.5
1986	27,920	28.0	55,980	39.7	5,050	24.0	7,090	42.2	1,080	6.5	3,040	26.0
1987	28,000	28.4	54,910	41.9	5,100	23.3	6,990	42.5	1,070	6.5	2,950	26.4
1988	28,070	28.3	54,870	42.9	5,100	22.4	6,760	42.0	1,070	7.5	2,850	26.7
1989	28,550	28.8	55,030	43.5	5,120	21.7	6,560	42.2	1,060	7.5	2,760	27.2

*Projections were made in 1980.

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 8-11

LIFE SCIENTISTS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	TOTAL		Biolog. Science Teachers		Life & Other Biol. Scientists		Agric/Forestry Teachers		Other Agric/ Food Scientists		Forestry/Conserv. Scientists	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**119,699**	**100.00**	**9,651**	**100.00**	**46,079**	**100.00**	**3,813**	**100.00**	**24,589**	**100.00**	**35,567**	**100.00**
MALES	**91,617**	**76.54**	**6,537**	**67.73**	**30,840**	**66.93**	**3,246**	**85.13**	**19,009**	**77.31**	**31,985**	**89.93**
White*	83,863	70.06	6,095	63.15	27,825	60.39	3,009	78.91	17,236	70.10	29,662	83.40
Black*	2,867	2.40	122	1.26	871	1.89	122	3.20	797	3.24	955	2.69
Indian/Alaskan Nat.*	600	0.50	8	0.08	60	0.13	18	0.47	47	0.19	467	1.31
Asian/Pacific Isl.*	2,397	2.00	230	2.38	1,483	3.22	41	1.08	438	1.78	205	0.58
Other Race*	133	0.11	7	0.07	60	0.13	18	0.47	12	0.05	33	0.09
Hispanic	1,796	1.50	75	0.78	541	1.17	38	1.00	479	1.95	663	1.86
FEMALES	**28,082**	**23.42**	**3,114**	**32.27**	**15,239**	**33.07**	**567**	**14.87**	**5,580**	**22.69**	**3,582**	**10.07**
White*	24,116	20.15	2,784	28.83	12,898	27.99	521	13.66	4,780	19.44	3,133	8.81
Black*	1,639	1.37	171	1.77	806	1.75	37	0.97	437	1.78	188	0.53
Indian/Alaskan Nat.*	171	0.14	13	0.13	52	0.11	0	0.00	37	0.15	69	0.19
Asian/Pacific Isl.*	1,358	1.13	113	1.17	1,012	2.20	2	0.05	198	0.81	63	0.18
Other Race*	37	0.03	5	0.05	32	0.07	0	0.00	0	0.00	0	0.00
Hispanic	733	0.61	30	0.31	439	0.95	7	0.18	128	0.52	129	0.36

* Non-Hispanic

FIELD: Biological/Agricultural Sciences

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 8-12

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE BIOLOGICAL/AGRICULTURAL SCIENCES OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1984

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Biological Sciences	4,751	1,013	21.3	456	9.6	134	2.8	215	4.5	72	1.5	120	2.5	49	1.0	4,295	90.4
Microbiology	1,863	699	37.5	250	13.4	104	5.5	109	5.9	47	2.5	92	4.8	4	0.2	1,613	86.6
Biological Technician	6,633	2,670	40.3	1,352	20.4	509	7.7	900	13.6	246	3.7	161	2.4	45	0.7	5,281	79.6
Agricultural Extension	49	13	26.5	3	6.1	2	4.1	1	2.0	1	2.0	1	2.0	0	0.0	46	93.9
Ecology	311	41	13.2	11	3.5	0	0.0	4	1.3	5	1.6	1	0.3	1	0.3	300	96.5
Zoology	131	25	19.1	21	16.0	2	1.5	1	0.8	1	0.8	19	14.5	0	0.0	110	84.0
Physiology	519	109	21.0	48	9.2	10	1.9	17	3.3	10	1.9	20	3.9	1	0.2	471	90.8
Entomology	751	38	5.1	47	6.3	3	0.4	13	1.7	11	1.5	20	2.7	3	0.4	704	93.7
Botany	203	61	30.1	17	8.4	6	3.0	4	2.0	4	2.0	9	4.4	0	0.0	186	91.6
Plant Pathology	314	26	8.3	20	6.4	4	1.3	7	2.2	3	1.0	9	2.9	1	0.3	294	93.6
Plant Physiology	276	22	8.0	12	4.3	2	0.7	1	0.4	0	0.0	11	4.0	0	0.0	264	95.7
Plant Protection & Quarantine	1,256	187	14.9	325	25.9	57	4.5	52	4.1	135	10.7	134	10.7	4	0.3	931	74.1
Horticulture	116	20	17.2	13	11.2	2	1.7	7	6.0	3	2.6	3	2.6	0	0.0	103	88.8
Genetics	289	33	11.4	23	8.0	3	1.0	2	0.7	3	1.0	18	6.2	0	0.0	266	92.0
Range Conservation	1,409	143	10.2	101	7.2	5	0.4	1	0.1	73	5.2	3	0.2	24	1.7	1,380	92.8
Soil Conservation	4,874	280	5.7	527	10.8	30	0.6	308	6.3	114	2.3	27	0.6	78	1.6	4,347	98.2
Forestry	6,661	503	7.6	285	4.3	25	0.4	32	0.5	93	1.4	52	0.8	108	1.6	6,376	95.7
Soil Science	1,960	100	5.1	155	7.9	5	0.3	103	5.3	21	1.1	20	1.0	11	0.6	1,805	92.1
Agronomy	370	9	2.4	22	5.9	0	0.0	9	2.4	8	2.2	4	1.1	1	0.3	348	94.1
Agricultural Management	3,770	387	10.3	368	9.8	27	0.7	218	5.8	111	2.9	13	0.3	26	0.7	3,402	90.2
General Fish & Wildlife Mgmt.	171	3	1.8	4	2.3	0	0.0	2	1.2	0	0.0	0	0.0	2	1.2	167	97.7
Fishery Biology	1,384	120	8.7	114	8.2	15	1.1	31	2.2	20	1.4	42	3.0	21	1.5	1,270	91.8
Wildlife Refuge Management	481	30	6.2	27	5.6	6	1.2	6	1.2	11	2.3	4	0.8	6	1.2	454	94.4
Wildlife Biology	1,430	199	13.9	73	5.1	13	0.9	8	0.6	34	2.4	16	1.1	15	1.0	1,357	94.9
Animal Science	112	5	4.5	6	5.4	1	0.9	4	3.6	0	0.0	2	1.8	0	0.0	106	94.6

FIELD: Health Professions

SOURCE: Tables throughout Professional Women and Minorities

TABLE 8-13

CURRENT ENROLLMENTS AND GRADUATES IN THE HEALTH PROFESSIONS BY SEX

FIELD	FIRST YEAR ENROLLMENTS			TOTAL ENROLLMENTS			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Medicine (1985-86)	16,963	5,800	34.2	66,585	21,650	32.5	16,318	4,904	30.1
Osteopathic Medicine (1983-84)	1,746	460	26.3	6,212	1,526	24.6	1,287	262	20.4
Dentistry (1984-85)	5,047	1,369	27.1	20,588	4,899	23.8	5,337	1,063	19.9
Veterinary Medicine (1984-85)	2,527	1,140	49.0	8,917	4,376	49.1	2,138	887	41.5
Optometry (1982-83)				4,460	1,391	31.2	1,117	306	27.4
Osteopathy (1983-84)	1,746	460	26.3	6,212	1,526	24.6	1,287	262	27.4
Pharmacy (1984-85)	6,225	3,433	55.2	16,772	9,150	54.6	5,393	2,657	47.0
Podiatry (1984-85)	724	150	20.7	2,616	569	21.7	631	79	12.5
Nursing, B.S. (1983)							343,184	327,134	95.3

TABLE 8-14

TOTAL ENROLLMENTS IN SELECTED U.S. HEALTH PROFESSIONS SCHOOLS BY RACIAL/ETHNIC CATEGORY

FIELD	TOTAL	TOTAL MINORITY	BLACK		AMERICAN INDIAN		HISPANIC		ASIAN AMERICAN		WHITE AND ALL OTHERS	
			No.	%	No.	%	No.	%	No.	%	No.	%
Medicine (1985-86)	66,589	11,831	3,849	5.8	235	0.4	3,458	5.2	4,289	6.4	54,754	82.2
Osteopathic Medicine (1983-84)	6,212	411	122	2.0	39	0.6	98	1.6	152	2.5	5,801	93.4
Dentistry (1983-84)	21,428	3,024	1,000	4.7	64	0.3	603	2.9	1,357	6.4	18,404	85.9
Veterinary Medicine (1984-85)	8,917	419	160	1.8	32	0.4	134	1.5	93	1.2	8,498	95.3
Optometry (1982-83)	4,561	498	76	1.7	19	0.4	107	2.3	296	6.5	4,063	89.1
Osteopathy (1983-84)	6,212	411	122	2.0	39	0.6	98	1.6	152	2.5	5,801	93.4
Pharmacy (1984-85)	16,772	3,289	967	5.8	36	0.2	703	4.2	598	3.6	13,483	80.4
Podiatry (1984-85)	2,616	356	185	7.1	11	0.4	57	2.2	99	3.8	2,260	86.4
Nursing (1980-81)*	238,473	23,315	14,365	6.0			5,795	2.4	3,155	1.3	215,158	90.2
Baccalaureate	96,099	11,147	6,126	6.4			3,339	3.5	1,682**	1.8	84,952	88.4
Associate Degree	101,365	9,800	6,522	6.4			2,034	2.0	1,244**	1.2	91,565	90.3
Diploma	41,009	2,368	1,717	4.2			422	1.0	229**	0.6	38,641	94.2

* Based only on programs which reported.

**Includes American Indian and Aleut.

FIELD: Health Professions

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 8-15

MEDICAL AND HEALTH PROFESSIONALS BY SEX AND RACE/ETHNICITY, 1980

	Dentists		Physicians		Optometrists		Podiatrists		Veterinarians	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	125,291	100.00	433,255	100.00	24,605	100.00	7,781	100.00	34,355	100.00
MALES	116,916	93.32	375,289	86.62	22,569	91.73	7,124	91.56	29,797	86.73
White*	108,990	86.99	317,142	73.20	21,544	87.56	6,805	87.46	28,706	83.56
Black*	2,666	2.13	10,090	2.33	198	0.80	203	2.61	402	1.17
Indian/Alaskan Native*	167	0.13	386	0.09	36	0.15	0	0.00	56	0.16
Asian/Pacific Isl.*	3,226	2.57	30,656	7.08	461	1.87	54	0.69	359	1.04
Other Race*	55	0.04	732	0.17	8	0.03	0	0.00	23	0.07
Hispanic	1,812	1.45	16,238	3.76	322	1.31	62	0.80	251	0.73
FEMALES	8,357	6.68	57,966	13.38	2,036	8.27	657	8.44	4,558	13.27
White*	6,890	5.50	40,700	9.39	1,765	7.17	538	6.91	4,216	12.27
Black*	468	0.37	3,153	0.73	56	0.23	78	1.00	120	0.35
Indian/Alaskan Native*	18	0.01	127	0.03	8	0.03	0	0.00	6	0.02
Asian/Pacific Isl.	606	0.48	11,262	2.60	97	0.39	41	0.53	73	0.21
Other Race*	12	0.01	154	0.04	0	0.00	0	0.00	6	0.02
Hispanic	381	0.30	2,570	0.59	110	0.45	0	0.00	137	0.40

	Dieticians		Pharmacists		Med. & Health Managers		Registered Nurses		Lic. Practical Nurses	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	67,270	100.00	145,637	100.00	110,881	100.00	1,285,299	100.00	435,176	100.00
MALES	6,787	10.09	110,635	75.97	54,583	49.23	52,755	4.10	14,764	3.39
White*	4,224	6.28	101,051	69.39	48,300	43.56	42,605	3.31	10,652	2.45
Black*	1,907	2.83	2,949	2.02	3,872	3.49	5,363	0.42	2,910	0.67
Indian/Alaskan Native*	25	0.04	158	0.11	205	0.18	175	0.01	128	0.03
Asian/Pacific Isl.*	179	0.27	4,313	2.96	709	0.64	1,892	0.15	322	0.07
Other Race*	27	0.04	136	0.09	38	0.03	110	0.01	18	0.00
Hispanic	425	0.63	2,028	1.39	1,459	1.32	2,610	0.20	734	0.17
FEMALES	60,483	89.91	35,002	24.03	56,298	50.77	1,232,544	95.90	420,412	96.61
White*	43,289	64.35	29,385	20.18	47,786	43.10	1,071,709	83.38	322,480	74.10
Black*	12,493	18.57	1,766	1.21	5,608	5.06	90,009	7.00	74,942	17.22
Indian/Alaskan Native*	307	0.46	89	0.06	359	0.32	3,681	0.29	2,662	0.61
Asian/Pacific Isl.	2,304	3.43	2,269	1.56	805	0.73	41,054	3.19	5,575	1.28
Other Race*	32	0.05	29	0.02	16	0.01	1,161	0.09	425	0.10
Hispanic	2,058	3.06	1,464	1.01	1,724	1.55	24,930	1.94	14,328	3.29

* Non-Hispanic

FIELD: Health Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 8-16

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Health Sciences Subtotal	6,761	798	11.8	3,206	823	25.7	4,278	1,346	31.5	636	335	52.7	718	413	57.5
Medicine & Surgery[1]	637	35	5.5	24	0	0.0									
Pharmacy	852	47	5.5	315	28	8.9	361	55	15.2	81	19	23.5	102	28	27.5
Public Health & Epidemiology[2]	1,163	192	16.5	521	175	33.6	656	304	46.3						
Public Health										51	29	56.9	52	35	67.3
Epidemiology										76	36	47.4	103	67	65.1
Veterinary Medicine	497	6	1.2	149	9	6.0	191	28	14.7	45	12	26.7	46	7	15.2
Hospital Administration[3]	68	4	5.9	26	1	3.8									
Optometry, Ophthalmology[4]	35	2	5.7												
Dentistry[4]	24	1	4.2												
Pharmacology	2,239	223	10.0	905	155	17.1	1,243	282	22.7						
Audiology & Speech Pathology[5]	504	127	25.2	702	264	37.6	674	163	24.2	113	70	61.9	109	68	65.4
Nursing[6]							354	339	95.8	126	119	94.4	160	153	95.6
Environmental Health[6]							192	41	21.4	38	6	15.8	40	13	32.5
Health Sciences, General[7]	89	12	13.5	80	18	22.5	143	28	19.6	20	4	20.0	13	5	38.5
Health Sciences, Other[7,8]	653	139	21.3	484	173	35.7	464	106	22.8	86	40	46.5	98	37	37.8

1 Dropped as a separate field in 1977.
2 "Epidemiology" added in 1977. Two fields broken out in 1983.
3 Dropped in 1978. It is now included in "Health Sciences, Other".
4 Dropped in 1961. It is now included with "Health Sciences, Other".
5 Added in 1968 as "Speech and Hearing Sciences". Name changed in 1983.
6 Added in 1978.
7 Added in 1962, as "Medical Sciences...". Name changed to "Health Sciences" in 1983.
8 Included "Psychiatry" which was dropped as a separate field in 1962.

FIELD: Health Occupations

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 8-17

HEALTH AND MEDICAL TECHNOLOGISTS, TECHNICIANS, ASSISTANTS AND AIDES BY SEX AND RACE/ETHNICITY, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Dental Assistants	158117	3294	2471	422	14	195	0	192	154823	137275	6213	818	2241	77	8199
	100.00%	2.08%	1.56%	0.27%	0.01%	0.12%	0.00%	0.12%	97.92%	86.82%	3.93%	0.52%	1.42%	0.05%	5.19%
Dental Hygienists	48192	708	568	37	0	68	0	37	45484	43559	662	37	486	23	717
	100.00%	1.53%	1.23%	0.08%	0.00%	0.15%	0.00%	0.08%	98.47%	94.30%	1.43%	0.08%	1.05%	0.05%	1.55%
Dental Laboratory/Medical Appliance Technicians	48748	33008	26519	1801	110	1726	32	2818	15740	13150	964	107	557	18	944
	100.00%	67.71%	54.40%	3.69%	0.23%	3.54%	0.07%	5.78%	32.29%	26.98%	1.98%	0.22%	1.14%	0.04%	1.94%
Health Aides, ex. nursing	292049	45375	29882	9920	417	1386	47	3723	246674	185389	42382	1501	3445	203	13754
	100.00%	15.54%	10.23%	3.40%	0.14%	0.47%	0.02%	1.27%	84.46%	63.48%	14.51%	0.51%	1.18%	0.07%	4.71%
Health Record Technologists/Technicians	15147	1314	945	196	8	67	12	86	13833	11477	1282	188	374	16	516
	100.00%	8.67%	6.24%	1.29%	0.05%	0.44%	0.08%	0.57%	91.33%	75.77%	8.46%	1.11%	2.47%	0.11%	3.41%
Health Technologists/ Technicians, Misc.	152539	55858	44338	6244	373	1928	120	2855	96681	76289	13930	521	2039	118	3784
	100.00%	36.62%	29.07%	4.09%	0.24%	1.26%	0.08%	1.87%	63.38%	50.01%	9.13%	0.34%	1.34%	0.08%	2.48%
Medical Diagnostic Technicians	492832	145389	111178	17116	791	7207	262	8835	347443	282762	39031	1342	12120	315	11873
	100.00%	29.50%	22.56%	3.47%	0.16%	1.46%	0.05%	1.79%	70.50%	57.37%	7.92%	0.27%	2.46%	0.06%	2.41%
Clinical Laboratory Technologists/Technicians	243982	62175	45783	8008	258	4084	123	3919	181807	145431	20068	604	9414	117	8173
	100.00%	25.48%	18.76%	3.28%	0.11%	1.67%	0.05%	1.61%	74.52%	59.61%	8.23%	0.25%	3.86%	0.05%	2.53%
Nursing Aides Orderlies/Attendants	1378118	168381	103172	49467	1358	2935	281	11148	1209757	798034	322742	10332	16757	1480	60432
	100.00%	12.22%	7.49%	3.59%	0.10%	0.21%	0.02%	0.81%	87.78%	57.91%	23.42%	0.75%	1.22%	0.11%	4.38%
Physicians' Assistants	30437	18211	15318	1401	132	294	21	1045	12226	9491	1608	79	338	8	708
	100.00%	59.83%	50.33%	4.60%	0.43%	0.97%	0.07%	3.43%	40.17%	31.18%	5.28%	0.26%	1.11%	0.02%	2.32%
Radiologic Technicians	96311	27356	21057	2864	160	1195	19	2061	68955	61042	5033	217	687	80	1916
	100.00%	28.40%	21.86%	2.97%	0.17%	1.24%	0.02%	2.14%	71.60%	63.38%	5.23%	0.23%	0.69%	0.08%	1.99%
Therapists															
Inhalation	48738	21179	16916	2124	90	519	6	1524	27559	22919	2982	118	451	27	1062
	100.00%	43.45%	34.71%	4.36%	0.18%	1.06%	0.01%	3.13%	56.55%	47.02%	6.12%	0.24%	0.93%	0.06%	2.18%
Occupational	17756	1499	1183	200	14	44	0	58	16257	14975	574	36	384	16	272
	100.00%	8.44%	6.66%	1.13%	0.08%	0.25%	0.00%	0.33%	91.56%	84.34%	3.23%	0.20%	2.16%	0.09%	1.53%
Physical	43075	11234	9552	993	33	244	8	404	31841	28245	1937	78	681	28	872
	100.00%	26.08%	22.18%	2.31%	0.08%	0.57%	0.02%	0.94%	73.92%	65.57%	4.50%	0.18%	1.58%	0.07%	2.02%
Speech	41298	4485	4152	176	22	25	0	110	36811	33908	1863	54	357	28	601
	100.00%	10.86%	10.05%	0.43%	0.05%	0.06%	0.00%	0.27%	89.14%	82.11%	4.51%	0.13%	0.86%	0.07%	1.46%
Therapists, Misc.	43068	13784	10687	2139	109	219	29	601	[illegible]	24987	2962	127	404	32	792
	100.00%	32.01%	24.81%	4.97%	0.25%	0.51%	0.07%	1.40%	67.99%	57.97%	6.88%	0.29%	0.94%	0.07%	1.84%

FIELD: Medicine

SOURCE: Women in Engineering, Medicine and Science, by Vera Kistiakowsky, The Conference on Women in Science and Engineering, National Research Council, June 11-12, 1973; and Journal of the American Medical Association, Vol. 234, No. 13, December 1975; Vol. 243, No. 9, March 1980; and Vol. 246, No. 25, December 1981; copyright by AMA; and Office of Minority Affairs, Association of American Medical Colleges, 1985

TABLE 8-18

ENROLLMENTS AND GRADUATES IN UNITED STATES MEDICAL SCHOOLS FOR SELECTED YEARS, BY SEX

YEAR	No. of U.S. Med. Schools	Total Enrollment	Women Students		Total M.D. Grads.	Women Graduates	
			No.	% of Total		No.	% of Total
1914-15	96	14,891	583	4.2	3,536	92	2.6
1924-25	80	18,200	910	5.0	3,974	204	5.1
1934-35	77	22,888	1,077	4.7	5,101	207	4.1
1954-55	81	28,583	1,537	5.4	6,977	345	4.9
1964-65	88	32,428	2,503	7.7	7,409	503	6.8
1974-75	114	53,554	9,661	18.0	12,714	1,706	13.4
1979-80	126	63,800	16,315	25.4	15,135	3,497	23.1
1984-85	127	67,016	21,316	31.8	16,318	4,904	30.1

SOURCE: Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 243, No. 9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; "Medical School Enrollments, 1973-74 thru 1977-78"; "Undergraduate Medical Education," Vol. 250, No. 12, September 23-30, 1983; Journal of Medical Education, Vol. 53, April 1978; and personal communications with the Association of American Medical Colleges

TABLE 8-19

APPLICANTS, FIRST YEAR, AND TOTAL ENROLLMENTS AND GRADUATES IN UNITED STATES MEDICAL SCHOOLS BY SEX, 1968-69 - 1985-86

YEAR	APPLICANTS			FIRST-YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	21,118	2,097	9.9	9,863	887	9.0	35,833	3,1365	8.8	8,049	607	7.5
1969-70	24,465	2,289	9.4	10,401	952	9.2	37,669	3,390	9.0	8,367	700	8.4
1970-71	24,987	2,734	10.9	11,348	1,256	11.1	40,487	3,894	9.6	8,974	827	9.2
1971-72	29,172	3,737	12.8	12,261	1,693	13.7	43,650	4,755	10.9	8,551	860	9.0
1972-73	36,135	5,480	15.2	13,726	2,315	16.9	47,546	6,099	12.8	10,391	924	8.9
1973-74	40,506	7,202	17.8	14,185	2,743	19.6	45,886	7,731	15.4	11,613	1,264	11.1
1974-75	42,624	8,712	20.4	14,963	3,260	22.3	54,074	9,786	18.1	12,714	1,706	13.4
1975-76	42,303	9,575	22.6	15,351	3,656	23.8	56,244	11,527	20.5	13,561	2,200	16.2
1976-77	42,155	10,244	24.3	15,667	3,876	24.7	58,266	13,059	22.4	13,607	2,611	19.2
1977-78	40,569	10,195	25.1	16,136	4,130	25.6	60,039	14,219	23.7	14,393	3,086	21.4
1978-79	36,636	9,561	26.1	16,620	4,184	25.2	62,213	15,293	24.4	14,966	3,445	23.0
1979-80	36,141	10,222	28.3	16,886	4,748	27.9	63,800	16,315	25.4	15,135	3,497	23.1
1980-81	36,100	10,644	29.5	17,204	4,970	28.9	65,497	17,373	26.5	15,667	3,892	24.8
1981-82	36,727	11,673	31.8	17,320	5,343	30.8	66,485	18,555	27.9	15,985	3,991	25.0
1982-83	35,730	11,685	32.7	17,230	5,445	31.6	66,886	19,627	29.3	15,728	4,193	26.7
1983-84	35,200	11,961	34.0	17,150	5,653	33.0	67,327	20,635	30.6	16,343	4,632	28.3
1984-85	35,944	12,476	34.7	16,997	5,715	33.6	67,016	21,316	31.8	16,318	4,904	30.1
1985-86	32,893	11,562	35.1	16,963	5,800	34.2	66,585	21,650	32.5			

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, October, 1978; "Medical Student Enrollment, 1971-72 through 1975-76", Journal of Medical Education, Vol. 51, February 1976; Vol. 52, February 1977, Vol. 53, April 1978; Vol. 54, December 1978, unpublished data 1979 and 1980 from the Association of American Medical Colleges; Journal of the American Medical Association, Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; and Vol. 250, No. 12, September 23, 1983, AMAD, and News Releases dated October 26, 1984 and October 28, 1985, AAMC

TABLE 8-20

FIRST-YEAR ENROLLMENTS IN U.S. SCHOOLS OF MEDICINE BY RACIAL/ETHNIC CATEGORY, 1968-69 THRU 1984-85

YEAR	Total First-Year Enrollment	Total U.S. Minority*		RACIAL/ETHNIC CATEGORY									
				Black American		American Indian†		Mexican Am./Chicano		Mainland Puerto Rican		Asian/ Pac. Islander	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69	9,863	413	4.2	266	2.7	3	*	20	0.2	3	*	121	1.2
1969-70	10,422	641	6.2	440	4.2	7	0.1	44	0.4	10	0.1	140	1.3
1970-71	11,348	998	8.8	697	6.1	11	0.1	73	0.6	27	0.2	190	1.7
1971-72	12,361	1,280	10.4	882	7.1	23	0.2	118	1.0	40	0.3	217	1.8
1972-73	13,677	1,437	10.5	957	7.0	34	0.2	137	1.0	44	0.3	231	1.7
1973-74	14,159	1,631	11.5	1,027	7.2	44	0.3	174	1.2	56	0.4	259	1.8
1974-75	14,763	1,839	12.5	1,106	7.5	71	0.5	227	1.5	69	0.5	275	1.9
1975-76	15,295	1,787	11.7	1,036	6.8	60	0.4	224	1.5	71	0.5	282	1.8
1976-77	15,613	1,891	12.1	1,040	6.7	43	0.3	245	1.6	72	0.5	348	2.2
1977-78	16,136	2,146	13.3	1,085	6.7	51	0.3	246	1.5	68	0.4	395	2.4
1978-79	16,501	2,225	13.4	1,061	6.4	47	0.3	260	1.6	75	0.5	452	2.7
1979-80	16,930	2,463	14.5	1,108	6.5	63	0.4	290	1.7	86	0.5	502	3.0
1980-81	17,186	2,585	15.0	1,128	6.6	67	0.4	258	1.5	95	0.6	572	3.5
1981-82+	17,268	2,933	16.9	1,196	6.9	70	0.4	300	1.7	105	0.6	765	4.4
1982-83	17,254	3,069	17.8	1,145	6.6	62	0.4	305	1.8	114	0.7	936	5.4
1983-84	17,150	3,124	18.2	1,173	6.8	75	0.4	301	1.8	109	0.6	983	5.7
1984-85	16,997	3,275	19.3	1,148	6.8	77	0.5	329	1.9	118	0.7	1,124	6.6
1985-86	16,963	3,447	20.3	1,117	6.6	60	0.4	331	2.0	136	0.8	1,295	7.6

*Includes students from other minority groups, not shown separately.

†Includes "Alaska Native" category since 1977-78.

*Less than 0.05 percent.

+Definition of U.S. Citizen expanded to include students holding permanent resident visa.

TABLE 8-21

TOTAL ENROLLMENTS IN U.S. SCHOOLS OF MEDICINE BY RACIAL/ETHNIC CATEGORY, 1968-69 THRU 1984-85

YEAR	Total Enrollment	Total U.S. Minority*		RACIAL/ETHNIC CATEGORY									
				Black American		American Indian†		Mexican Am./Chicano		Mainland Puerto Rican		Asian/ Pac. Islander	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69	35,833	1,275	3.6	783	2.2	9	*	59	0.2	3	*	421	1.2
1969-70	37,690	1,630	4.3	1,042	2.8	18	*	92	0.2	26	0.1	452	1.2
1970-71	40,238	2,294	5.7	1,509	3.8	18	*	148	0.4	48	0.1	571	1.4
1971-72	43,650	3,072	7.0	2,055	4.7	42	0.1	252	0.6	76	0.2	647	1.5
1972-73	47,366	3,918	8.3	2,582	5.5	69	0.1	361	0.8	90	0.2	719	1.5
1973-74	50,716	4,840	9.5	3,049	6.0	97	0.2	496	1.0	123	0.2	883	1.7
1974-75	53,554	5,560	10.4	3,355	6.3	159	0.3	638	1.2	172	0.3	959	1.8
1975-76	55,818	5,928	10.6	3,456	6.2	172	0.3	699	1.3	197	0.4	1,022	1.8
1976-77	57,765	6,319	10.9	3,517	6.1	186	0.3	780	1.4	232	0.4	1,177	2.0
1977-78	60,039	7,260	12.1	3,587	6.0	201	0.3	831	1.4	261	0.4	1,422	2.4
1978-79	62,213	7,596	12.2	3,537	5.7	202	0.3	882	1.4	277	0.4	1,592	2.6
1979-80	63,800	8,130	12.8	3,627	5.7	212	0.3	964	1.5	283	0.4	1,777	2.8
1980-81	65,189	8,614	13.2	3,708	5.7	221	0.3	951	1.5	329	0.5	1,924	3.0
1981-82+	66,298	9,724	14.7	3,884	5.9	229	0.3	1,040	1.6	350	0.5	2,518	3.8
1982-83	66,748	10,345	15.5	3,869	5.8	235	0.4	1,071	1.6	369	0.6	2,936	4.4
1983-84	67,327	10,798	16.0	3,892	5.8	258	0.4	1,082	1.6	368	0.5	3,290	4.9
1984-85	67,016	11,374	17.0	3,944	5.9	257	0.4	1,126	1.7	380	0.6	3,763	5.6
1985-86	66,585	11,831	17.8	3,849	5.8	235	0.4	1,143	1.7	428	0.6	4,289	6.4

*Includes students from other minority groups, not shown separately.

†Includes "Alaska Native" category since 1977-78.

*Less than 0.05 percent.

+ Definition of U.S. Citizen expanded to include students holding permanent resident visas.

FIELD: Medicine

SOURCE: Journal of the American Medical Association, Vol. 234, No. 13, Dec. 29, 1975, Vol. 238, No. 26, Dec. 26, 1977, Vol. 240, No. 26, Dec. 22, 1978, Vol. 243, No. 9, March 1980, Vol. 246, No. 25, Dec. 25, 1981, Vol. 248, No. 24, Dec. 24, 1982, Vol. 250, No. 12, September 23, 1983. Copyright by A.M.A. Fact sheets dated 2/28/85 and 10/18/85, and Personal Communication, AAMC.

TABLE 8-22

STUDENTS REPEATING THE ACADEMIC YEAR BY RACIAL/ETHNIC GROUP

	1974-75 Enrolled		1978-79 Enrolled		1980-81 Enrolled		1982-83 Enrolled		1983-84 Enrolled		1985-86 Enrolled	
	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.
FIRST YEAR CLASS												
Black	1,117	161	1,077	155	1,127	195	1,083	171	1,096	184	1,117	194
Mexican American	231	32	260	24	259	30	293	31	284	38	331	39
Puerto Rican	71	7	262	12	306	21	343	30	341	23	136	15
Other Hispanic			149	8	222	9	263	14	232	10	259	9
American Indian	72	?	47	4	69	10	62	7	75	8	60	8
Asian/Pacific Isl.			483	13	583	11	859	16	867	24	1,295	47
All Other Students	13,472	162	14,342	241	14,638	288	14,323	297	14,280	316	13,765	383
ALL OTHER CLASSES												
Black	2,279	136	2,533	168	2,592	149	2,646	153	2,583	144	2,732	*
Mexican American	407	33	640	31	698	24	741	34	753	39	812	*
Puerto Rican	97	7	642	20	744	15	930	33	956	17	292	*
Other Hispanic			336	7	442	6	650	14	683	12	732	*
American Indian	89	7	148	6	157	7	171	5	182	8	175	*
Asian/Pacific Isl.			1,191	29	1,370	20	1,813	31	2,067	26	2,994	*
All Other Students	36,239	229	40,644	315	42,290	313	42,705	263	43,044	328	41,885	*

* Not Available

TABLE 8-23

MINORITY GRADUATES IN MEDICINE, SELECTED YEARS, 1969-70 - 1984-85

YEAR		Black		Am. Indian/ Alaskan Nat.		Mexican American		Puerto Rican		Asian/ Pacific Isl.	
	Total No.	No.	%	No.	%	No.	%	No.	%	No.	%
1969-70	8,367	165	2.0	4	0.05	10	0.1	9	0.1		
1972-73	10,391	341	3.3	8	0.08	39	0.4	10	0.1		
1974-75	12,714	638	5.0	22	0.2	110	0.9	28	0.2		
1976-77	13,607	752	5.5	29	0.2	144	1.1	38	0.3		
1977-78	14,393	793	5.5	47	0.3	172	1.2	176	1.2	319	2.2
1978-79	14,966	774	5.2	49	0.3	194	1.3	190	1.3	350	2.4
1980-81	15,667	773	4.9	43	0.3	201	1.3	223	1.4	414	2.7
1981-82	15,985	763	5.0	45	0.3	225	1.4	222	1.4	459	2.9
1982-83	15,802	883	5.6	45	0.3	228	1.4	289	1.8	483	3.1
1983-84	**16,343**	**818**	**5.0**	**59**	**0.4**	**220**	**1.3**	**302**	**1.8**	**679**	**4.2**
Women	4,632	378	2.3	20	0.1	59	0.4	100	0.6	217	1.3
Men	11,711	440	2.7	39	0.2	161	1.0	202	1.2	462	2.8
1984-85	**16,318**	**837**	**5.1**	**65**	**0.4**	**242**	**1.5**	**318**	**1.9**	**750**	**4.6**
Women	4,904	378	2.3	18	0.1	77	0.5	97	0.6	238	1.4
Men	11,414	456	2.8	47	0.3	165	1.0	221	1.4	512	3.1

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1984 Ed., U.S. Dept. of Health and Human Services, Public Health Service, and Releases dated Oct. 26, 1984 and Oct. 28, 1985, AAMC

TABLE 8-24

COMPARISON OF MINORITY WOMEN FIRST-YEAR AND TOTAL ENROLLMENT IN SCHOOLS OF MEDICINE IN THE UNITED STATES: ACADEMIC YEARS 1971-72, 1977-78, 1983-84 AND 1985-86

CATEGORY	1971-1972			1977-1978			1983-1984			1985-1986		
	Men & Women In Category	WOMEN No.	WOMEN %	Men & Women In Category	WOMEN No.	WOMEN %	Men & Women In Category	WOMEN No.	WOMEN %	Men & Women In Category	Women No.	Women %
						FIRST-YEAR ENROLLMENT						
Total First-Year Enrollment	12,361	1,693	13.7	16,136	4,130	25.6	17,150	5,653	33.0	16,963	5,800	34.2
First-Year Minority Enrollment	1,280	266	20.8	2,002	705	35.2	2,889	1,141	39.5	3,447	1,392	40.4
Black	882	200	22.7	1,085	443	40.8	1,173	544	46.4	1,117	582	52.1
Mexican American	118	10	8.5	246	66	26.8	301	102	33.9	331	117	35.3
Mainland Puerto Rican	40	6	15.0	68	23	33.8	109	44	40.4	136	51	37.5
Other Hispanic	*	*	*	157	43	27.4	248	76	30.6	259	79	30.5
American Indian	23	8	34.8	51	15	29.4	75	38	50.7	60	30	50.0
Asian	217	42	19.4	395	115	29.1	983	337	34.3	1,295	441	34.1
						TOTAL ENROLLMENT						
Total Enrollment	43,650	4,755	10.9	60,039	14,218	23.7	67,327	20,635	30.6	66,585	21,650	32.5
Total Minority Enrollment	3,072	583	19.0	6,728	2,220	33.0	9,873	3,724	37.7	11,831	4,517	38.2
Black	2,055	420	20.4	3,587	1,371	38.2	3,892	1,748	44.9	3,849	1,796	46.7
Mexican American	252	24	9.5	831	189	22.7	1,082	352	32.5	1,143	366	32.0
Mainland Puerto Rican	76	13	17.1	261	89	34.1	368	143	38.9	428	162	37.9
Other Hispanic	*	*	*	426	99	23.2	983	285	29.0	991	312	31.5
American Indian	42	10	23.8	201	55	27.4	258	95	36.8	235	95	40.4
Asian	647	116	17.9	1,422	417	29.3	3,290	1,101	33.5	896	316	35.3

* "Other Hispanic" category not used in 1971-72.

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1984 Edition, U. S. Department of Health and Human Services, Public Health Service, Bureau of Health Professions, Division of Disadvantaged Assistance. HRS-DV 84-5, September 1984

TABLE B-25

ACTIVE FEDERAL AND NON-FEDERAL WOMEN PHYSICIANS IN THE UNITED STATES, BY SPECIALTY: SELECTED YEARS 1963 THROUGH 1981

SPECIALTY	1963		1970		1976		1980		1981	
	No.	%	No.	%	No.	%	No.	%	No	%
All Active Women Physicians[1]	14,957	5.7	21,318	6.9	28,966	8.3	44,706	10.8	50,894	11.8
General Practice	3,103	4.2	2,486	4.3	3,164	5.7	4,677	7.8	5,423	8.9
Medical Specialties, Total	4,560	8.1	7,101	9.2	10,884	11.0	17,872	14.2	20,269	15.4
Allergy	71	8.5	117	6.8	127	7.5	116	7.6	120	7.9
Cardiovascular Diseases	48	2.8	187	2.9	182	2.7	327	3.3	364	3.5
Dermatology	194	5.9	278	6.9	401	8.3	628	11.1	776	12.5
Gastroenterology	8	1.4	46	2.3	46	1.9	118	2.9	140	3.1
Internal Medicine	1,513	4.4	2,383	5.7	4,482	7.7	8,130	11.4	9,456	12.6
Pediatrics[2]	2,605	18.3	3,907	20.8	5,486	23.3	8,314	28.2	9,217	30.0
Pulmonary Diseases	121	9.8	183	7.9	160	7.1	239	6.4	246	6.2
Surgical Specialties, Total	1,482	2.1	2,129	2.5	3,362	3.4	5,561	5.0	6,399	5.6
General Surgery	187	0.7	311	1.0	757	2.3	1,150	3.4	1,336	3.9
Obstetrics/Gynecology	913	5.8	1,337	7.1	1,897	8.5	3,243	12.3	3,717	13.7
Ophthalmology	239	3.0	307	3.1	436	3.8	667	5.1	751	5.7
Orthopedic Surgery	39	0.6	46	0.5	69	0.6	144	1.0	177	1.2
Otolaryngology	55	1.1	62	1.0	80	1.4	141	2.2	161	2.5
Plastic Surgery	28	2.8	40	2.5	68	2.9	120	4.0	132	4.1
Other[3]	21	0.2	36	0.3	55	0.4	106	0.8	125	0.8
Other Specialties, Total	5,812	9.5	9,602	10.7	11,556	12.2	16,596	14.0	18,803	15.1
Anesthesiology	1,017	13.3	1,516	14.0	1,836	13.9	2,388	15.0	2,650	15.7
General Preventive Medicine	117	14.1	100	12.4	106	13.1	109	13.5	137	16.9
Neurology	109	6.0	215	7.0	382	8.6	580	10.2	648	10.4
Occupational Medicine	64	3.5	86	3.2	80	3.4	118	5.0	170	6.5
Pathology[4]	683	9.3	1,282	12.2	1,748	14.4	2,241	16.4	2,551	18.1
Physical Medicine/Rehabilitation	115	12.3	241	16.3	330	19.2	515	24.0	623	26.5
Psychiatry[5]	1,939	11.7	2,942	12.7	4,042	14.9	5,257	17.1	5,910	18.6
Public Health	289	16.3	564	18.6	535	20.6	470	20.3	442	20.9
Radiology[6]	329	3.8	673	5.0	1,095	6.5	1,742	8.6	1,969	9.3
Other and Unspecified	1,150	8.4	1,983	9.6	1,402	10.1	3,176	13.0	3,703	14.1

[1] Excludes inactive women physicians. Also excludes women physicians not classified as to status or activity and with address unknown.
[2] Includes pediatric allergy and pediatric cardiology.
[3] Consists of neurological, colon and rectal, thoacic, and urological surgery.
[4] Includes forensic pathology.
[5] Includes child psychiatry.
[6] Includes both diagnostic and therapeutic radiology.

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1984, U. S. Department of Health and Human Services

TABLE 8-26

MEDICAL SCHOOL FACULTY BY SEX AND ETHNIC ORIGIN, 1975, 1978 & 1981

	Male						Female						Total					
	1975		1978		1981		1975		1978		1981		1975		1978		1981	
Ethnic Origin	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY	NUMBER OF FACULTY	PERCENT OF FACULTY
Black American	536	1.6	619	1.5	564	1.4	197	3.2	201	2.8	246	3.1	733	1.8	820	1.7	810	1.7
American Indian	12	*	20	*	30	*	2	*	2	*	7	*	14	*	22	*	37	*
Mexican American	64	0.2	76	0.2	88	0.2	10	0.2	13	0.2	17	0.2	74	0.2	89	0.2	105	0.2
Puerto Rican	210	0.6	245	0.6	218	0.5	65	1.1	75	1.0	93	1.2	275	0.7	320	0.7	311	0.7
Sub-total	(822)	(2.4)	(960)	(2.4)	(900)	(2.3)	(274)	(4.5)	(291)	(4.1)	(363)	(4.6)	(1096)	(2.7)	(1251)	(2.7)	(1263)	(2.7)
Asian	1940	5.6	2264	5.7	2564	6.4	443	7.2	560	7.8	755	9.7	2383	5.9	2824	6.0	3319	7.0
Other Hispanic	499	1.4	544	1.4	581	1.5	67	1.1	77	1.1	105	1.3	566	1.4	621	1.3	686	1.4
Caucasian	28426	82.5	32980	82.4	35123	83.1	4883	79.8	5681	79.4	6109	78.1	33309	82.1	38641	82.0	39232	82.2
Unknown	2772	8.0	3259	8.2	2711	6.8	452	7.4	544	7.4	490	6.3	3224	7.9	3803	8.1	3201	8.1
Total	34459	100.0	39987	100.0	39879	100.0	6119	100.0	7153	100.0	7822	100.0	40578	100.0	47140	100.0	47701	100.0

Figures for 1975 and 1978 include Part-time as well as Full-time faculty.
** Less than 0.1 percent.*

NOTE: Percentages may not add to 100.0 percent because of rounding.

SOURCE: Public Health Service, Health Resources and Services Administration, Women and Minorities in the Health Fields, 1984 Edition

TABLE 8-27

PHYSICIANS IN MEDICAL INTERNSHIPS AND RESIDENCIES, BY SEX, 1968-69 - 1982-83

Academic year	Internships			Residencies		
	Both sexes	Female	Percent female	Both sexes	Female	Percent female
1968-69	10,464	1,257	12.0	35,047	3,239	9.2
1969-70	10,808	1,191	11.0	37,139	3,591	9.6
1970-71	11,552	1,372	11.9	39,463	3,929	10.0
1971-72	12,066	1,642	13.6	42,512	4,382	10.3
1972-73	11,164	1,739	15.6	45,081	4,942	11.0
1973-74	11,031	1,523	13.8	49,082	5,202	10.6
1974-75	9,827	1,750	17.8	52,665	5,834	11.1
1975-76	*	*	*	*	*	*
1976-77	14,200	600	4.2	60,561	7,816	12.9
1977-78	---	---	---	56,019	8,630	15.4
1978-79	---	---	---	63,163	11,839	18.7
1979-80	---	---	---	64,615	12,431	19.2
1980-81	---	---	---	61,465	13,738	22.4
1981-82	---	---	---	68,217	16,040	23.5
1982-83	---	---	---	69,142	16,341	23.6

The term "internship" is no longer used to designate graduate training programs.

* Data were not collected for 1975-76.

FIELD: Osteopathy

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974, and Women in Health Careers, by Maryland Pennell, Shirlene Showell, American Public Health Association, DHEW No. (HRA) 75-55, June 1975, p. 74, and American Association of Colleges of Osteopathic Medicine, Annual Statistical Report 1981, 1982, 1983 and 1984, and personal communication. 1985

TABLE 8-28

FIRST YEAR & TOTAL ENROLLMENTS AND GRADUATES IN SCHOOLS OF OSTEOPATHIC MEDICINE IN THE U.S., BY SEX, 1968-69 THRU 1983-84

YEAR	1st Yr. Enrollment			Total Enrollment			Graduates		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	521	21	4.0	1,879	53	2.8	427	8	1.9
1969-70	577	14	2.4	1,997	59	3.0	432	12	2.8
1970-71	623	17	2.7	2,151	61	2.8	472	11	2.3
1971-72	670	29	4.3	2,304	79	3.4	485	18	3.7
1972-73	810	56	6.9	2,579	116	4.5	649	18	2.8
1973-74	884	83	9.3	2,780	181	6.5	594	17	2.9
1974-75	974	106	10.9	3,139	267	8.5	702	44	6.3
1975-76	1,038	140	13.5	3,443	362	10.5	809	58	7.2
1976-77	1,088	179	16.5	3,671	472	12.9	908	84	9.3
1977-78	1,163	192	16.5	3,926	570	14.8	971	68	7.0
1978-79	1,322	222	16.8	4,221	688	16.3	1,004	163	16.2
1979-80	1,426	265	18.6	4,571	789	17.3	1,059	192	18.1
1980-81	1,496	329	22.0	4,940	971	19.7	1,151	202	17.6
1981-82	1,582	378	23.9	5,304	1,108	20.9	1,017	186	18.3
1982-83	1,682	428	25.4	5,822	1,317	22.6	1,317	261	19.8
1983-84	1,746	460	26.3	6,212	1,526	24.6	1,287	262	20.4

TABLE 8-29

FIRST YEAR AND TOTAL ENROLLMENTS IN U.S. OSTEOPATHIC COLLEGES BY MINORITY GROUP, 1978-79 - 1983-84

MINORITY GROUP	1978-79		1979-80		1980-81		1981-82		1982-83		1983-84	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
First Year Enrollment	1,322	100.0	1,426	100.0	1,496	100.0	1,582	100.0	1,682	100.0	1,746	100.0
Black American	31	2.4	40	2.9	43	2.9	37	2.3	38	2.3	49	2.8
American Indian	10	0.7	6	0.4	8	0.5	12	0.8	10	0.6	13	0.7
Hispanic	17	1.3	18	1.3	18	1.2	22	1.4	33	2.0	38	2.2
Asian Am./Pacific Isl.	16	1.2	30	2.1	30	2.0	33	2.1	46	2.7	52	3.0
First Year Minority Total	74	5.7	93	6.5	99	6.6	104	6.6	127	7.6	152	8.7
Total Enrollment	4,221	100.0	4,571	100.0	4,940	100.0	5,304	100.0	5,822	100.0	6,212	100.0
Black American	46	2.2	100	2.2	94	1.9	104	2.0	116	2.0	122	2.0
American Indian	24	0.6	26	0.6	19	0.4	26	0.5	25	0.4	39	0.6
Hispanic	11	0.8	45	1.0	52	1.1	62	1.2	81	1.4	98	1.6
Oriental American	45	1.0	70	1.5	87	1.8	109	2.1	133	2.3	152	2.5
Total Minority Enrollment	192	4.5	241	5.3	252	5.1	301	5.7	355	6.1	411	6.6

FIELD: Dentistry

SOURCE: Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine, and Law, 1969-70 through 1974-75, NCES 76-023; Annual Report Dental Education Series, 1975-76 through 1984-85, American Dental Association; and Personal Communication with the American Association of Dental Schools

TABLE 8-30

APPLICATIONS, ENROLLMENTS, GRADUATES, U.S. DENTAL SCHOOLS, BY SEX, 1968-69 - 1984-85

YEAR	APPLICANTS			FIRST-YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69				4,203	38	0.9	15,408	167	1.1		36	1.1
1969-70	10,325	120	1.2	4,354	69	1.6	16,136	227	1.4	3,748	36	1.0
1970-71	10,410	160	1.5	4,639	103	2.2	16,510	274	1.7	3,777	46	1.2
1971-72	11,102	302	2.7	5,103	160	3.1	17,433	355	2.0	3,894	46	1.2
1972-73	13,478	506	3.8	6,010	241	4.0	17,774	556	3.1	4,086	58	1.4
1973-74	14,820	727	4.9	6,123	423	6.9	19,215	892	4.6	4,478	88	2.0
1974-75	14,850	1,193	8.0	5,828	638	10.9	20,163	1,403	7.0	4,513	92	2.0
1975-76	15,734	*		5,763	707	12.3	20,767	1,861	9.0	4,969	156	3.1
1976-77	14,807	*		5,935	802	13.5	21,013	2,349	11.1	5,336	248	4.6
1977-78	12,835	*		5,954	880	14.8	21,510	2,796	13.0	5,177	369	7.1
1978-79	11,753	*		6,301	1,000	15.9	22,179	3,112	14.0	5,324	634	11.9
1979-80	10,520	*		6,132	1,076	17.5	22,482	3,482	15.5	5,424	634	11.7
1980-81	9,648	1,960	20.3	6,030	1,194	19.8	22,842	3,879	17.0	5,256	715	13.6
1981-82	8,852	1,861	21.0	5,855	1,268	21.7	22,621	4,227	18.7	5,550	825	14.9
1982-83	7,724	1,722	22.3	5,498	1,223	22.2	22,235	4,457	20.0	5,371	838	15.6
1983-84	7,128	1,779	25.0	5,371	1,313	24.4	21,428	4,733	22.1	5,274	1,089	20.6
1984-85	6,490	*		5,047	1,369	27.1	20,588	4,899	23.8	5,337	1,063	19.9

* Not available.

SOURCE: Minorities and Women in the Health Fields, U.S. Department of HEW, Public Health Service, Health Resources Administration, DHEW Pub. No. (HRA) 76-22, September 1975; Minority Report 1977-78, Supplement 3 to the Annual Report 1977-78 Dental Education, American Dental Association, February 1978; and Annual Report on Dental Education 1980-81, 1983-84 and 1984-85, and Supplements, American Dental Association.

TABLE 8-31

FIRST YEAR AND TOTAL ENROLLMENTS IN U.S. DENTAL SCHOOLS BY MINORITY GROUP, SELECTED YEARS, 1972-73 - 1984-85

MINORITY GROUP	1972-73		1977-78		1980-81		1983-84		1984-85		
	No.	%	No.	%	No.	%	No.	%	Men	Women	%
FIRST YEAR ENROLLMENT	5,287	100.0	5,954	100.0	6,030	100.0	5,274	100.0	5,047		100.0
Black	266	5.0	296	5.0	283	4.7	276	5.3	164	135	5.9
American Indian	5	0.1	10	0.1			19	0.4	13	4	0.3
Hispanic	56	1.1	110	1.8	160	2.6	172	3.3	158	106	5.2
Asian	138	2.6	225	3.8	317	5.3	406	7.8	311	154	9.2
Other	10	0.2									
FIRST YEAR MINORITY TOTAL	475	9.0	641	10.8	772	12.8	873	16.8	646	399	20.7
TOTAL ENROLLMENT	18,209	100.0	21,510	100.0	22,842	100.0	21,428	100.0	15,689	4,899	100.0
Black	765	4.2	968	4.5	1,022	4.5	1,000	4.7	*	*	
American Indian	14	0.1	59	0.2	53	0.2	64	0.3	*	*	
Hispanic	133	0.7	390	1.8	519	2.3	603	2.9	*	*	
Asian	409	2.2	743	3.4	1,040	4.5	1,357	6.4	*	*	
Other	51	0.3									
TOTAL MINORITY ENROLLMENT	1,371	7.5	2,160	10.1	2,634	11.5	3,024	14.3		3,555	17.3

* Not Available.

FIELD: Dentistry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974; and Annual Report Dental Education Series, 1973-74 through 1984-85, American Dental Association; and Personal Communication, June 26, 1984.

TABLE 8-32

GRADUATES OF SCHOOLS OF DENTISTRY IN THE UNITED STATES, BY RACIAL/ETHNIC CATEGORY, 1970-71 THROUGH 1984-85

ACADEMIC YEAR	TOTAL GRADUATES	RACIAL / ETHNIC CATEGORY													
		TOTAL MINORITY		BLACK		AMERICAN INDIAN		HISPANIC		ASIAN		OTHER MINORITY		WHITE	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1970-71	3,598 [1]	137	3.8	53	1.5	1	[4]	9	0.3	62	1.7	12	0.3	3,461	96.2
1971-72 [2]	3,689 [1]	167 [3]	4.5	74	2.0	1	[4]	12	0.3	61	1.7	19	0.5	3,522	95.5
1972-73	4,191 [1]	241	5.8	110	2.6	1	[4]	25	0.6	73	1.7	32	0.8	3,950	94.2
1973-74	4,479	335	7.5	154	3.4	2	0.4	31	0.7	113	2.5	35	0.8	4,144	92.5
1974-75	4,933	368	7.5	187	3.8	5	0.1	33	0.7	107	2.2	30	0.6	4,565	92.5
1975-76	5,282	467	8.8	213	4.0	3	0.1	50	0.9	157	3.0	44	0.8	4,815	91.2
1977-78	5,177	461	8.9	215	4.2	15	0.2	69 [4]	1.3	162	3.1			4,716	91.1
1978-79	5,368	485	9.0	182	3.4	18	0.3	77	1.4	208	3.9			4,833	91.0
1980-81	5,256	520	9.9	190	3.7	14	0.3	119	2.3	197	3.7			4,736	90.1
1981-82	5,550	564	10.2	214	3.9	14	0.3	90	1.6	246	4.4			4,986	89.8
1982-83	5,371	614	11.6	227	4.3	12	0.2	110	2.1	265	5.0			4,757	88.6
1983-84	5,274	571	10.0	200	3.5	12	0.2	144	2.5	215	3.8			4,703	89.2
1984-85	5,337	724	13.6	219	4.1	9	0.2	192	3.6	304	5.7			4,613	86.4

[1] Excludes University of Puerto Rico and two schools which did not report racial/ethnic data on graduates in 1970-71 and 1971-72.

[2] Minority data concern only U.S. citizens; non-citizen minority graduates are included with white graduates.

[3] Includes non-citizen minority graduates from Howard University.

[4] Category now called Hispanic - includes Mexican American, Spanish American and Puerto Rican.

FIELD: Dentistry

SOURCE: Minorities and Women in the Health Fields, 1984 Edition, U.S. Dep't. of Health and Human Services, Public Health Services, Public Health Service, Bureau of Health Professions, Division of Disadvantaged Assistance, in Manuscript; American Dental Assn., Council on Dental Education, Dental Faculty Information; Supplement to the Annual Report on Dental Education, 1981-82; also prior supplementary report for 1976-77

TABLE 8-33

TEACHING FACULTY IN SCHOOLS OF DENTISTRY IN THE U.S.
BY RACE/ETHNICITY AND SEX: 1976-77 and 1981-82

Racial/ethnic category	Both sexes	Male	Female	Percent female	Minority percent distribution (both sexes)
1976-77					
Total faculty 1/	11,467	10,520	947	8.3	100.0
Total minority faculty	829	719	110	13.3	7.2
Black	348	307	41	11.8	3.0
Hispanic	111	96	15	13.5	1.0
American Indian	2	2	-	-	2/
Asian	210	177	33	15.7	1.8
Other minority	158	137	21	13.3	1.4
1981-82					
Total faculty 1/	12,683	11,618	1,065	8.4	100.0
Total minority faculty 3/	1,023	855	168	16.4	8.1
Black	422	352	70	16.6	3.3
Hispanic	124	99	25	20.2	1.0
American Indian	5	4	1	20.0	2/
Asian	472	400	72	15.3	3.7

1/ Includes both full-time and part-time faculty for basic science and clinical subjects.

2/ Percent is less than 0.05

3/ The category "Other minority" was not in use in 1981-82.

FIELD: Veterinary Medicine

SOURCE: Women's Participation in First Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine and Law, 1969-70 - 1974-75, NCES 76-023; Digest of Educational Statistics 1979; Personal Communication, American Veterinary Medicine Association, November 7, 1980, January 15, 1982, April 11, 1983, June 19, 1984, and December 28, 1985

TABLE 8-34

ENROLLMENTS AND GRADUATES IN U.S. SCHOOLS OF VETERINARY MEDICINE BY SEX, 1968-69 - 1984-85

YEAR	FIRST YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	1,327	120	9.0	4,779	362	7.6	1,006	56	5.6
1969-70	1,386	159	11.5	4,726	417	8.8	1,206	90	7.5
1970-71	1,439	158	11.0	4,716	444	9.4	1,252	98	7.8
1971-72	1,509	228	15.1	5,163	593	11.5	1,247	117	9.4
1972-73	1,760	327	18.6	5,439	745	13.7	1,299	133	10.2
1973-74	1,520	350	23.0	5,528	957	17.3	1,384	155	11.2
1974-75	1,792	453	25.3	5,985	1,220	20.4	1,415	225	15.9
1975-76	1,807	618	34.2	6,274	1,719	27.4	1,532	277	18.1
1976-77	1,856	598	32.2	6,571	1,805	27.5	1,586	362	22.8
1977-78	1,873	706	37.7	6,903	2,129	30.8	1,635	409	25.0
1978-79	2,086	766	36.7	7,312	2,471	33.8	1,704	499	29.3
1979-80	1,747	711	40.7	7,007	2,570	36.7	1,852	615	33.2
1980-81	2,237	987	44.1	8,154	3,220	39.4	1,931	702	36.3
1981-82	2,313	1,100	47.5	8,499	3,576	42.0	1,886	668	35.4
1982-83	2,247	1,124	50.0	8,682	4,028	46.4	2,012	822	40.9
1983-84	2,320	1,127	48.6	8,816	4,152	47.1	2,138	887	41.5
1984-85	2,327	1,140	49.0	8,917	4,376	49.1			

TABLE 8-35

ENROLLMENTS AND GRADUATES IN U. S. SCHOOLS OF VETERINARY MEDICINE BY SEX AND MINORITY GROUP, 1984-85

SEX AND MINORITY GROUP	FIRST YEAR ENROLLMENT		TOTAL ENROLLMENT		GRADUATES	
	No.	%	No.	%	No.	%
TOTAL	2,327	100.0	8,917	100.0	2,138	100.0
Male	1,187	51.0	4,541	50.9	1,251	58.5
Female	1,140	49.0	4,376	49.1	887	41.5
TOTAL MINORITY†	131	5.6	419	4.7	98	4.6
Male	62	2.7	186	2.1	56	2.6
Female	69	3.0	233	2.6	42	2.0
BLACK	57	2.5	160	1.8		
Male	24	1.0	54	0.6		
Female	33	1.4	106	1.2		
HISPANIC	34	1.5	134	1.5		
Male	21	0.9	75	0.8		
Female	13	0.6	59	0.7		
ASIAN	25	1.1	83	0.9		
Male	8	0.3	33	0.4		
Female	17	0.7	50	0.6		
PACIFIC ISLANDER	1	*	10	0.1		
Male	0	0.0	4	*		
Female	1	*	6	0.1		
AMERICAN INDIAN	14	0.6	32	0.4		
Male	9	0.4	20	0.2		
Female	5	0.2	12	0.1		

† Includes those who do not indicate specific racial identity.

* Less than 0.05%

FIELD: Veterinary Medicine

SOURCE: Personal Communication. Association of American Veterinary Medical Colleges, January 15, 1982, April 11, 1983, June 19, 1984, and December 28, 1985

TABLE 8-36

VETERINARIANS BY SEX, 1983 AND 1985

	TOTAL	WOMEN	% W
Members of the AVMA*			
1983	37,715	5,265	14.0
1985	40,137	6,092	15.2

* AVMA estimates that its membership includes 80-85% of all veterinarians.

SOURCE: Supply of Dentists, Optometrists, Pharmacists and Veterinarians, 1950-2000, Bureau of Health Professions, Health Resources and Services Administration

TABLE 8-37

ACTIVE VETERINARIANS BY TYPE OF EMPLOYMENT AND SEX: DECEMBER 31, 1982

TYPE OF EMPLOYMENT	TOTAL	WOMEN	% Women
All Active	38,810	4,810	12.4
Self-employed	20,090	1,190	5.9
Private practice employee	10,190	2,610	25.6
College or university	3,430	610	17.8
Industrial employee	990	60	6.1
Federal gov't--civilian	1,580	90	5.7
Armed Forces	760	50	6.6
State or local gov't	900	50	5.6
Other	870	150	17.2

FIELD: Optometry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974 and Women in Health Careers, by Maryland Pennell and Shirlene Showell, Health Resources Administration, U.S. Department of HEW, HRA 75-55, June 1975; data from the Association of Schools and Colleges of Optometry; and surveys conducted by Council on Optometric Education, American Optometric Association

TABLE 8-38

TOTAL ENROLLMENTS AND GRADUATES OF OPTOMETRY BY SEX, ACADEMIC YEARS 1969-70 THRU 1984-85

YEAR	NUMBER OF STUDENTS					GRADUATES*		
	TOTAL	MEN	% MEN	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN
1969-70	2,488	2,415	97.1	73	2.9	444	23	5.2
1970-71	2,831	2,749	97.1	82	2.9	530	12	2.3
1971-72	3,097	2,985	96.4	112	3.6	684	18	2.6
1972-73	3,328	3,158	94.9	170	5.1	692	17	2.5
1973-74	3,529	3,268	92.7	261	7.3	793	34	4.3
1974-75	3,679	3,328	90.5	351	9.5	809	39	4.8
1975-76	3,888	3,432	88.3	456	11.7	906	72	7.9
1976-77	4,033	3,491	86.6	542	13.4	923	103	11.2
1977-78	4,440	3,741	84.3	699	15.7	978	126	12.9
1978-79	4,436	3,679	82.9	757	17.1	916	140	15.3
1979-80	4,500	3,632	80.7	868	19.3	1,073	166	15.5
1980-81	4,540	3,555	78.3	985	21.7	1,096	204	18.6
1981-82	4,541	3,464	76.3	1,077	23.7	1,113	224	20.1
1982-83	4,561	3,388	74.3	1,173	25.7	1,120	246	22.0
1983-84	4,539	3,248	71.6	1,291	28.4	1,171	285	24.3
1984-85	4,460	3,069	68.8	1,391	31.2	1,117	306	27.4

*From 1974-75, this figure is full-time fourth year student enrollment.

TABLE 8-39

ENROLLMENTS IN U.S. SCHOOLS OF OPTOMETRY BY ETHNIC STATUS 1973-74 THRU 1982-83

YEAR	TOTAL		BLACK		SPANISH SURNAMED		NATIVE AMERICAN INDIAN		ASIAN AMERICAN		WHITE AND ALL OTHERS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973-74	3,529	100.00	52	1.47	39	1.11	5	0.14	141	4.00	3,292	93.28
1974-75	3,679	100.00	73	1.98	45	1.22	8	0.22	153	4.16	3,400	92.42
1975-76	3,888	100.00	83	2.13	55	1.41	5	0.13	166	4.27	3,579	92.05
1976-77	4,033	100.00	89	2.21	46	1.14	6	0.15	157	3.89	3,735	92.61
1977-78	4,440	100.00	79	1.78	55	1.24	7	0.16	153	3.45	4,146	93.38
1978-79	4,436	100.00	62	1.39	66	1.49	11	0.25	166	3.74	4,131	93.12
1979-80	4,500	100.00	56	1.24	67	1.49	13	0.29	208	4.62	4,156	92.36
1980-81	4,540	100.00	57	1.26	80	1.76	12	0.26	243	5.35	4,148	90.48
1981-82	4,541	100.00	57	1.26	98	2.16	9	0.20	283	6.23	4,094	90.16
Men	3,464	76.28	29	0.64	72	1.59	6	0.13	181	3.99	3,176	69.44
Women	1,077	23.72	28	0.62	26	0.57	3	0.07	102	2.25	918	20.22
1982-83	4,561	100.00	76	1.67	107	2.35	19	0.42	296	6.49	4,063	89.08
Men	3,388	74.28	38	0.83	74	1.62	13	0.29	181	3.97	3,082	67.56
Women	1,173	25.72	38	0.83	33	0.72	6	0.13	115	2.52	981	21.51

FIELD: Pharmacy

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1982-83, U.S. Office of Education (NCES)

TABLE 8-40

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1982-83

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	4,172	692	16.6	232	33	14.2	74	4	5.4
1969-70	4,543	853	18.8	229	38	16.6	79	11	13.9
1970-71	4,593	951	20.7	194	40	20.6	94	1	1.1
1971-72	4,668	1,088	23.3	221	49	22.2	101	8	7.9
1972-73	5,070	1,277	25.1	167	36	21.6	296	75	25.3
1973-74	5,773	1,560	27.0	240	44	18.3	132	16	12.1
1974-75	6,487	1,821	28.1	285	75	26.3	206	46	22.3
1975-76	7,018	2,137	30.5	307	60	19.5	81	8	9.9
1976-77	7,495	2,434	32.5	274	72	26.3	75	10	13.3
1977-78	7,468	2,712	36.3	320	91	28.4	96	13	13.5
1978-79	6,919	2,759	39.9	330	89	27.0	104	23	22.1
1979-80	7,122	2,919	41.0	380	117	30.8	89	16	18.0
1980-81	6,640	2,910	43.8	336	120	35.7	108	17	15.7
1981-82	6,367	2,930	46.0	368	135	36.7	127	21	16.5
1982-83	5,708	2,795	49.0	331	123	37.2	111	25	22.5
TOTAL	90,052	29,838	33.1	4,214	1,122	26.6	1,773	394	22.2

SOURCE: The Status of Women in Pharmaceutical Education, by Christopher A. Rodowskas, Jr., American Association of Colleges of Pharmacy; Doctorate Recipients from United States Universities, Summary Reports 1972-84, National Research Council

TABLE 8-41

DOCTORAL RECIPIENTS IN THE PHARMACEUTICAL SCIENCES BY SEX, 1920-1984

YEAR OF DOCTORATE	PHARMACY			PHARMACOLOGY			PHARMACEUTICAL CHEMISTRY		
	TOTAL	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN
1920-29	11	1	9.1	22	2	11.0	9	0	0.0
1930-39	22	1	4.5	93	10	10.8	27	2	7.4
1940-49	18	1	5.5	190	7	3.7	47	4	8.5
1950-59	263	15	5.7	466	45	9.7	194	2	1.0
1960-69	366	21	5.7	958	98	10.2	471	18	3.8
1970-71	115	6	5.2	325	38	11.8	122	9	7.4
1971-72	57	2	3.5	187	23	12.3	48	8	16.7
1972-73	72	1	1.4	160	27	16.9	50	6	12.0
1973-74	61	5	8.2	178	35	19.7	62	6	9.7
1974-75	70	7	10.0	166	26	15.7	66	9	13.6
1975-76	63	9	14.3	205	25	12.2	55	9	16.4
1976-77	49	6	12.2	196	42	21.4	50	5	10.0
1977-78	61	9	14.8	198	12	6.1	51	5	9.8
1978-79	69	15	21.7	217	33	15.2	43	6	14.0
1979-80	70	9	12.9	251	60	23.3	52	15	28.8
1980-81	69	11	15.9	280	69	24.6	52	5	9.6
1981-82	81	12	14.8	276	76	27.5	55	11	20.0
1982-83	81	19	23.5	217	71	32.7	78	16	20.5
1983-84	102	28	27.5	237	60	25.3	56	15	26.8
TOTAL	1,700	178	10.5	4,626	799	16.4	1,584	151	9.5

FIELD: Pharmacy

SOURCE: Degrees Conferred by Schools and Colleges of Pharmacy for the Academic Year 1975-76," by Lars Solender, reprinted from the American Journal of Pharmaceutical Education, Vol. 40, December 1976; and Degrees Conferred by Schools and Colleges of Pharmacy for the Academic Year 1981-82 and 1983-84 by Steven H. Chasin, American Association of Colleges of Pharmacy

TABLE 8-42

NUMBER AND PERCENT OF PHARMACY GRADUATES BY TYPE OF DEGREE, ETHNIC GROUP AND SEX, 1975-76, 1981-82 AND 1983-84

ETHNIC GROUP AND SEX	TYPE OF DEGREE								
	Bachelor of Science and Bachelor of Pharmacy			Master of Science			Doctor of Pharmacy and Doctor of Philosophy		
	1975-76	1981-82	1983-84	1975-76	1981-82	1983-84	1975-76	1981-82	1983-84
White American	6,191	5,561	4,447	279	282	254	498	550	589
Male	4,409	2,996	2,239	220	189	168	366	342	326
Female	1,782	2,565	2,236	59	93	86	132	208	263
% White	88.9	86.2	82.5	71.2	61.6	68.1	50.2	68.8	62.5
Black American	183	238	228	6	5	8	22	19	26
Male	107	86	93	5	2	3	8	11	10
Female	76	152	135	1	3	5	14	8	16
% Black	2.6	3.7	4.2	1.5	1.1	2.1	2.7	2.4	2.8
Asian American	149	198	173	24	6	16	218	151	186
Male	89	102	80	18	2	12	121	66	82
Female	60	96	93	6	4	4	97	65	104
% Asian American	2.1	3.1	3.2	6.1	1.3	4.3	26.4	16.4	19.8
Native American	11	12	10	0	1	0	0	1	0
Male	9	6	6	0	1	0	0	1	0
Female	2	6	4	0	0	0	0	0	0
% Native American	0.2	0.2	0.2	0.0	0.2	0.0	0.0	0.1	0.0
Hispanic American	101	224	197	4	6	4	17	21	30
Male	64	80	127	2	2	1	14	9	16
Female	37	144	70	2	4	3	3	12	14
% Spanish American	1.4	3.5	3.7	1.0	1.3	1.1	2.1	2.6	3.2
Other American	35	18	16	6	6	0	4	1	6
Male	31	12	9	6	2	0	3	1	5
Female	4	6	7	0	4	0	1	0	1
% Other	0.5	0.3	0.3	1.5	1.3	0.0	0.5	0.1	0.6
Non-American	294	197	294	73	131	91	68	77	105
Male	197	133	182	49	87	53	55	52	69
Female	97	66	112	24	44	38	13	25	36
% Non-American	4.2	3.1	5.5	18.6	28.6	24.4	8.2	9.6	11.2
TOTAL*	6,964	6,448	5,393	392	459	373	827	800	942
Male	4,906	3,417	2,736	300	295	237	567	492	508
Female	2,058	3,031	2,657	92	165	136	260	318	434
% Female	29.6	47.0	49.3	23.5	36.0	36.5	31.4	39.8	46.1

* Includes those who did not designate ethnicity.

FIELD: Pharmacy

SOURCE: Report on Enrollment in Schools and Colleges of Pharmacy, 1973-74 and Graduate Enrollment Data, October 1973 and Fall 1977; Graduate Study in Member Colleges, 1974-75; Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1976, 1978, 1979, 1980, 1981, 1982, 1983 and 1984; Degrees Conferred by Schools & Colleges of Pharmacy, 1975-76, 1978-79, 1979-80, 1981-82, 1982-1983, and 1983-84, American Association of Colleges of Pharmacy; prior annual reports; Women in Health Careers, Health Resources Administration, U.S. Department of Health, Education, & Welfare, June 1975.

TABLE 8-43

COMBINED ENROLLMENTS OF THE FINAL THREE YEARS IN U.S. SCHOOLS OF PHARMACY BY SEX 1968-69 THRU 1984-85 AND BACHELOR GRADUATES IN PHARMACY BY SEX, 1968-69 THRU 1983-84

ACADEMIC YEAR	TOTAL	Men	Women	% W	BACHELOR GRADUATES		
					TOTAL	Women	% W
1968-69*	14,753	12,069	2,684	18.2	4,031	656	16.3
1969-70	15,292	12,104	3,188	20.8	4,366	792	18.1
1970-71*	15,326	11,956	3,370	22.0	4,356	876	20.1
1971-72	16,808	12,621	4,187	24.9	4,416	997	22.6
1972-73	18,956	13,936	5,020	26.5	4,745	1,150	24.2
1973-74	21,287	15,258	6,029	28.3	5,414	1,415	26.1
1974-75	23,235	16,168	7,067	30.4	6,246	1,685	27.0
1975-76	24,416	16,303	8,113	33.2	6,994	2,057	29.4
1976-77	24,082	15,226	8,856	36.8	7,649	2,541	33.2
1977-78	23,884	14,538	9,346	39.1	7,450	2,715	36.5
1978-79	23,649	13,636	9,442	39.9	7,095	2,835	40.0
1979-80	23,074	13,028	10,046	43.5	6,985	2,831	40.5
1980-81	22,093	11,839	10,254	46.4	6,908	3,144	45.5
1981-82	20,468	10,527	9,941	48.6	6,448	3,031	47.0
1982-83	19,350	9,511	9,839	50.8	5,919	2,925	49.4
1983-84	18,831	8,932	9,899	52.6	5,547	2,720	49.0
1984-85	16,772	7,722	9,150	54.6			

* Excludes University of Puerto Rico.

TABLE 8-44

THIRD FROM THE LAST YEAR ENROLLMENTS IN U.S. SCHOOLS OF PHARMACY BY SEX, 1968-69 THRU 1984-85

Academic Year	TOTAL	Men	Women	% W
1968-69*	5,406	4,322	1,084	20.1
1969-70	5,521	4,265	1,256	22.7
1970-71*	56,694	4,345	1,349	23.7
1971-72	6,532	4,849	1,683	25.8
1972-73	7,546	5,452	2,094	27.7
1973-74	8,143	5,785	2,358	29.0
1974-75	8,734	5,910	2,824	32.3
1975-76	8, 0	5,601	3,109	35.7
1976-77	8,.08	4,969	3,239	39.5
1977-78	8,461	5,035	3,426	40.5
1978-79	8,321	4,694	3,627	43.6
1979-80	8,035	4,398	3,637	45.3
1980-81	7,551	3,896	3,655	48.4
1981-82	6,899	3,441	3,458	50.1
1982-83	6,574	3,078	3,496	53.2
1983-84	6,715	3,097	3,618	53.9
1984-85	6,225	2,792	3,433	55.2

*Excludes University of Puerto Rico.

FIELD: Pharmacy

SOURCE: Report on Enrollment in Schools and Colleges of Pharmacy, 1973-74 and Graduate Enrollment Data, October 1975 and Fall 1978; Graduate Study in Member Colleges, 1974-75; Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1978, 1978, 1979, 1980, 1981, 1982, 1983, and 1984 American Association of Colleges of Pharmacy; prior annual reports; Women in Health Careers, Health Resources Administration, U.S. Department of Health, Education, & Welfare, June 1975.

TABLE 8-45

TOTAL FULL-TIME ENROLLMENT IN THE FINAL THREE YEARS IN PHARMACY SCHOOLS PROFESSIONAL DEGREE PROGRAMS BY SEX AND MINORITY GROUP, FALL 1974-FALL 1984

	Black		Hispanic American*		Native American		Asian American		Other American Minority		Non-American Minority		TOTAL MINORITY		
FALL	M	F	M	F	M	F	M	F	M	F	M	F	M	F	TOTAL
1974	455	294	357	454	26	6	398	249	39	6	435	141	1,984	1,350	3,334
1975	488	427	418	510	26	10	407	278	60	35	728	289	2,127	1,549	3,676
1976	447	491	380	582	26	11	422	303	20	16	565	257	1,860	1,670	3,530
1977	453	531	344	627	32	7	420	341	28	20	522	288	1,799	1,814	3,613
1978	538	554	358	609	21	13	488	592	55	35	459	248	1,690	1,851	3,541
1979	410	548	359	585	23	13	510	461	35	30	476	238	1,793	1,875	3,668
1980	381	564	360	574	21	15	497	538	23	18	520	320	1,802	2,029	3,831
1981	378	554	303	484	25	13	464	576	33	33	518	541	1,721	2,001	3,722
1982	389	546	315	469	21	15	425	647	42	44	628	402	1,820	2,123	3,943
1983	419	600	318	469	20	22	446	676	31	50	638	456	1,872	2,273	4,145
1984	361	606	269	434	19	17	229	369	15	27	947	598	1,439	1,851	3,290

*Includes University of Puerto Rico.

SOURCE: Enrollment Report on Graduate Degree Programs in Pharmacy, Fall 1984, American Association of Colleges of Pharmacy

TABLE 8-46

FULL-TIME GRADUATE ENROLLMENTS BY PROGRAM TYPE, LEVEL, ETHNICITY AND SEX, FALL 1984

PROGRAM TYPE AND LEVEL	BLACK		HISPANIC		ASIAN		NATIVE AMERICAN		OTHER		FOREIGN		TOTAL MINORITY	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Pharmacy														
Master's	2	2	1	5	1	2	0	0	0	0	78	51	82	60
Doctorate	3	1	3	4	9	6	1	0	1	1	169	62	186	74
Pharm. Chemistry														
Master's	3	2	0	1	0	1	0	0	1	0	31	16	35	20
Doctorate	2	0	7	4	8	4	3	0	1	0	114	44	132	52
Pharmacognosy														
Master's	0	0	0	0	0	0	0	0	0	0	5	4	5	4
Doctorate	1	0	0	1	2	0	0	0	0	0	36	21	39	22
Pharmacology														
Master's	11	7	1	0	5	5	0	0	0	0	23	14	40	26
Doctorate	1	0	0	0	1	4	0	1	0	0	6	7	8	11
Pharmacy Admin.														
Master's	0	1	1	1	2	1	0	0	0	0	13	13	16	16
Doctorate	1	4	0	2	0	0	0	0	1	1	11	5	13	12
Hospital Pharmacy														
Master's	0	1	0	2	0	0	2	1	0	0	6	7	8	11
Doctorate	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FIELD: Pharmacy

SOURCE: Health Resources and Services Administration, Bureau of Health Professions, Division of Associated and Dental Health Professions

TABLE 8-47

NUMBER OF ACTIVE PHARMACISTS, BY SEX: ESTIMATED 1982, AND PROJECTED FOR SELECTED YEARS, 1985-2000

YEAR	Number of Active Pharmacists	Men	Women	% W
1982	151,400	119,000	32,400	21.4
1985	159,400	119,600	39,800	25.0
1990	169,900	119,000	50,900	30.0
1995	178,000	117,100	60,900	34.2
2000	184,900	114,800	70,100	37.9

FIELD: Podiatry

SOURCE: Annual Report Summary, 1984-85, American Association of Colleges of Podiatric Medicine

TABLE 8-48

TOTAL ENROLLMENTS IN SCHOOLS OF PODIATRY IN THE UNITED STATES BY SEX, 1969-70 THRU 1984-85

ACADEMIC YEAR	NUMBER OF STUDENTS				
	TOTAL	MEN	% MEN	WOMEN	% WOMEN
1969-70	1,095	1,085	99.1	10	0.9
1970-71	1,148	1,132	98.6	16	1.4
1971-72	1,268	1,252	98.7	16	1.3
1972-73	1,401	1,380	98.5	21	1.5
1973-74	1,623	1,583	97.6	40	2.4
1974-75	1,836	1,777	96.8	59	3.2
1975-76	2,081	1,981	95.2	100	4.8
1976-77	2,204	2,047	92.9	157	7.1
1977-78	2,388	2,129	89.2	259	10.8
1978-79	2,498	2,230	89.3	268	10.7
1979-80	2,531	2,226	87.9	305	12.1
1980-81	2,577	2,271	88.1	306	11.9
1981-82	2,584	2,223	86.0	361	14.0
1982-83	2,608	2,180	83.6	428	16.4
1983-84	2,556	2,080	81.4	476	18.6
1984-85	2,616	2,047	78.3	569	21.7

SOURCE: Journal of Podiatric Medical Education, Vol. 12, No. 1, Winter 1981, and Annual Report Summary, 1984-85, American Association of Colleges of Podiatric Medicine

TABLE 8-49

MINORITY ENROLLMENT IN COLLEGES OF PODIATRIC MEDICINE, 1978-1984

MINORITY GROUP	1978-79		1979-80		1980-81		1981-82		1982-83		1983-84		1984-85	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Black	77	3.1	93	3.7	110	4.3	125	4.8	154	5.9	170	6.7	185	7.1
Hispanic	27	1.1	28	1.1	32	1.2	40	1.5	33	1.3	41	1.6	57	2.2
American Indian	8	0.3	5	0.2	6	0.2	5	0.2	5	0.2	9	0.4	11	0.4
Asian/Pac. Islander	51	2.0	63	2.5	68	2.6	68	2.6	75	2.9	68	2.7	99	3.8
Total Minority	163	6.5	189	7.5	216	8.4	238	9.2	267	10.2	297	11.6	356	13.6
Total Students	2,498	100.0	2,531	100.0	2,577	100.0	2,584	100.0	2,608	100.0	2,556	100.0	2,616	100.0

FIELD: Nursing

SOURCE: Earned Degrees Conferred Series, 1969-70 thru 1982-83, U.S. Office of Education (NCES)

TABLE 8-50

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1969-70 - 1982-83

YEAR	BACHELOR'S			MASTER'S			Ph.D.		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1969-70	11,280	11,120	98.6	1,549	1,531	98.8	11	10	90.9
1970-71	12,283	12,029	97.9	1,542	1,511	98.0	7	6	85.7
1971-72	13,245	12,902	97.4	1,846	1,815	98.3	10	10	100.0
1972-73	15,526	15,063	97.0	2,093	1,983	94.7	17	13	76.5
1973-74	19,408	18,653	96.1	2,293	2,229	97.2	14	14	100.0
1974-75	23,813	22,709	95.4	2,220	2,154	97.0	16	16	100.0
1975-76	26,846	25,484	94.9	3,058	2,968	97.1	16	16	100.0
1976-77	28,402	26,870	94.6	3,257	3,155	96.9	24	22	91.6
1977-78	30,307	28,661	94.6	3,812	3,671	96.3	56	53	94.6
1978-79	31,808	30,002	94.3	4,256	4,088	96.1	68	65	95.6
1979-80	32,852	31,054	94.5	4,637	4,464	96.3	118	116	98.3
1980-81	32,794	31,140	95.0	5,096	4,899	96.1	113	104	96.5
1981-82	33,177	31,482	94.9	5,312	4,034	94.8	134	128	95.5
1982-83	31,442	29,965	95.3	4,451	4,298	96.6	124	117	94.4
TOTAL	343,184	327,134	95.3	45,422	43,350	95.4	728	695	95.5

SOURCE: The Registered Nurse Population, November, 1980; Health Resources and Services Administration, 1983

TABLE 8-51

REGISTERED NURSE POPULATION, BY SEX, RACIAL/ETHNIC BACKGROUND, AGE GROUP AND EMPLOYMENT STATUS, 1980

Sex, Racial/Ethnic and Age group	Totals 1/			Employed in nursing			Not employed in nursing		
	Number in Sample	Estimated Number	Estimated Percent	Number in Sample	Estimated Number	Estimated Percent	Number in Sample	Estimated Number	Estimated Percent
Total	30,375	1,662,382	100.0	23,563	1,272,651	100.0	6,791	368,535	100.0
Sex									
Male	826	45,060	2.7	715	38,842	3.0	108	6,218	1.6
Female	29,275	1,603,069	96.4	22,643	1,223,301	96.1	6,624	379,443	97.7
Not known	276	14,254	.9	204	10,508	.8	59	2,867	.7
Racial/Ethnic Backgrounds									
White (non-Hispanic)	28,018	1,521,752	91.5	21,562	1,151,221	90.4	6,444	370,243	95.3
Black (non-Hispanic)	905	60,849	3.7	812	54,585	4.3	92	6,222	1.6
Asian/Pacific Islander	575	33,600	2.0	495	30,470	2.4	80	3,130	.8
American Indian/Alaskan Native	87	4,248	.3	54	3,045	.2	33	1,204	.3
Hispanic	583	20,816	1.2	325	17,938	1.4	58	2,878	.7
Not known	407	21,118	1.3	300	15,392	1.2	94	4,859	1.2
Age Group									
Less than 25	2,393	128,554	7.7	2,273	122,354	9.6	118	6,200	1.6
25-29	5,573	289,777	17.4	4,548	234,138	20.0	723	35,599	9.2
30-34	4,707	255,400	15.4	3,815	206,091	16.2	592	48,101	12.7
35-39	3,774	205,978	12.4	2,958	158,025	12.5	615	46,958	12.1
40-44	3,221	180,326	10.8	2,534	141,459	11.1	667	38,867	10.0
45-49	2,751	150,087	9.0	2,152	117,467	9.2	599	32,620	8.4
50-54	2,432	137,156	8.2	1,877	102,987	8.1	555	34,157	8.8
55-59	2,268	124,613	7.5	1,546	83,003	6.5	701	41,561	10.7
60-64	1,424	81,685	4.9	757	41,791	3.3	665	39,697	10.2
65 and over	1,199	74,210	4.5	334	18,657	1.5	863	55,527	14.3
Not known	613	34,737	2.1	487	25,874	2.0	133	8,176	2.1

1/ Includes an estimated 994 registered nurses for whom it was not known whether or not they were employed in nursing.

NOTE: Estimated number and percent may not add to total due to rounding.

SOURCE: Women and Minorities in the Health Fields, 1984 Edition, Public Health Service, Health Resources & Services Admin.

TABLE 8-52

GRADUATES OF NURSING PROGRAMS BY PROGRAM AND SEX, SELECTED YEARS, 1962-63 - 1980-81

Academic year	Graduates			Percent male of total graduates
	Total	Female	Male	
	All registered nurse programs			
1962-63	32,398	32,005	393	1.2
1965-66	35,125	34,521	604	1.7
1968-69	36,898	36,104	794	2.2
1971-72	44,504	42,811	1,693	3.8
1974-75	62,056	58,249	3,807	6.1
1977-78	70,432	66,530	3,902	5.5
1980-81	68,520	64,984	3,536	5.2
	BN baccalaureate degree programs			
1962-63	4,481	4,453	28	0.6
1965-66	5,498	5,449	49	0.9
1968-69	7,582	7,498	84	1.1
1971-72	9,841	9,563	278	2.8
1974-75	17,656	16,728	938	5.3
1977-78	23,287	22,116	1,171	5.0
1980-81	22,674	21,533	1,141	5.0
	BN associate degree programs			
1962-63	1,479	1,399	80	5.4
1965-66	3,349	3,204	145	4.3
1968-69	8,474	8,122	352	4.2
1971-72	17,262	16,165	897	5.3
1974-75	25,395	23,382	2,013	7.9
1977-78	32,343	30,267	2,076	6.4
1980-81	33,653	31,749	1,904	5.7
	BN diploma programs			
1962-63	26,438	26,153	285	1.1
1965-66	26,278	25,868	410	1.6
1968-69	20,842	20,484	358	1.7
1971-72	17,401	17,083	518	2.9
1974-75	18,995	18,139	856	4.5
1977-78	14,802	14,147	655	4.4
1980-81	12,193	11,702	491	4.0
	All practical nurse programs			
1962-63	19,514	18,770	744	3.8
1965-66	25,688	24,898	790	3.1
1968-69	31,501	30,301	1,200	3.8
1971-72	35,752	34,121	1,631	4.6
1974-75	34,748	33,568	1,180	3.4
1977-78	39,396	38,001	1,395	3.5
1980-81	36,980	34,577	1,403	3.9

Data for academic years 1962-63 and 1965-66 are based on all graduates; data for 1968-69 and 1971-72 are based on those graduates in schools responding to question on male graduates; data for 1974-75 through 1980-81 are based on those graduates in schools responding to question on minority graduates, male graduates, or both.

SOURCE: Nursing Data Book 1983-84, National League for Nursing, 1984

TABLE 8-53

PERCENTAGE OF MINORITY GRADUATES IN NURSING, BY TYPE OF PROGRAM, 1980-81

	Diploma	Assoc	BA/BS
Men	4.4	6.4	5.5
Blacks	3.5	7.3	5.6
Hispanics	1.5	2.6	2.2
Asian	0.7	1.7	2.2

SOURCE: Facts About Nursing 84-85, American Nurses Association, 1985

TABLE 8-54

LICENCED PRACTICAL/VOCATIONAL NURSES BY RACE OR ETHNIC GROUP AND EMPLOYMENT STATUS, NOV. 1983

Racial/ethnic background	*Total*		*Employment status*			
			Employed as L.P.N./L.V.N.		*Not employed as L.P.N./L.V.N.*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Total	*781,506*	*100.0*	*539,463*	*100.0*	*242,042*	*100.0*
White (non-Hispanic)	612,751	78.4	416,765	77.3	195,985	81.0
Black (non-Hispanic)	103,475	13.2	80,526	14.9	22,949	9.5
Hispanic	18,698	2.4	13,511	2.5	5,187	2.1
Asian/Pacific Islander	11,868	1.5	8,734	1.6	3,134	1.3
American Indian/ Alaskan Native	6,782	0.9	4,367	0.8	2,414	1.0
Not reported	27,932	3.6	15,560	2.9	12,372	5.1
Female	754,025	96.5	521,979	96.8	232,046	95.9
Male	24,527	3.1	16,135	3.0	8,393	3.5
Not reported	2,954	0.4	1,349	0.3	1,604	0.7

FIELD: Medical Technology

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1982-83, U.S. Office of Education (NCES)

TABLE 8-55

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1982-83

YEAR	BACHELOR'S			MASTER'S			Ph.D.		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	2,846	2,551	89.6	28	23	82.1	0	0	0.0
1969-70	3,228	2,823	87.5	71	57	80.3	0	0	0.0
1970-71	3,145	2,755	87.6	72	55	76.4	4	1	25.0
1971-72	3,407	2,880	84.5	97	62	63.9	0	0	0.0
1972-73	3,806	3,102	81.5	95	77	81.1	0	0	0.0
1973-74	4,840	3,864	79.8	164	95	57.9	0	0	0.0
1974-75	5,087	4,005	78.7	174	91	52.3	0	0	0.0
1975-76	5,445	4,356	80.0	266	137	51.5	0	0	0.0
1976-77	5,286	4,242	80.2	333	184	55.3	3	2	66.7
1977-78	5,288	4,221	79.8	292	175	59.9	4	1	25.0
1978-79	5,235	4,143	79.1	303	179	59.1	1	0	0.0
1979-80	5,130	4,128	80.5	231	154	66.7	1	1	100.0
1980-81	4,896	4,012	81.9	233	150	64.4	1	1	100.0
1981-82	4,596	3,784	82.3	207	131	63.3	4	3	75.0
1982-83	3,249	2,631	81.0	144	69	47.9	0	0	0.0
TOTAL	65,484	53,497	81.7	2,710	1,639	60.5	18	9	50.0

FIELD: Radiologic Technology

SOURCE: Earned Degrees Conferred Series, 1968-69 and 1982-83, U.S. Office of Education (NCES)

TABLE 8-56

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1982-83

ACADEMIC YEAR	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	Both Sexes	Women	% Women	Both Sexes	Women	% Women	Both Sexes	Women	% Women
1968-69	23	11	47.8	8	3	37.5	3	0	0.0
1969-70	48	22	45.8	4	1	25.0	1	0	0.0
1970-71	48	19	39.6	32	9	28.1	10	0	0.0
1971-72	65	20	30.8	28	7	25.0	4	0	0.0
1972-73	80	32	40.0	40	19	47.5	3	0	0.0
1973-74	169	54	32.0	48	7	14.6	6	2	33.3
1974-75	205	75	36.6	50	9	18.0	2	0	0.0
1975-76	263	104	39.5	27	4	14.8	4	0	0.0
1976-77	312	136	43.6	39	12	30.8	0	0	0.0
1977-78	392	199	50.8	42	8	19.0	2	0	0.0
1978-79*	434	226	52.1	46	8	17.4	5	1	20.0
1979-80	466	259	55.6	47	10	21.3	6	0	0.0
1980-81	480	291	60.6	35	7	20.0	3	0	0.0
1981-82	453	271	59.8	34	10	29.4	4	1	25.0
1982-83	439	291	66.3	24	8	33.3	0	0	0.0

* Beginning in academic year 1978-79, tabulated statistics exclude earned degrees conferred by institutions of higher education in the Possessions.

FIELD: Hospital and Health Care Administration

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1982-83, U.S. Office of Education (NCES)

TABLE 8-57

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1982-83

YEAR	BACHELOR'S			MASTER'S			Ph.D.		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	37	3	8.1	403	59	14.6	2	1	50.0
1969-70	32	6	18.8	479	64	13.4	7	0	0.0
1970-71	60	4	6.7	518	64	12.4	14	0	0.0
1971-72	126	55	43.6	677	102	15.1	12	0	0.0
1972-73	121	16	13.2	743	82	11.0	12	2	16.7
1973-74	185	32	17.3	990	206	20.8	21	4	19.0
1974-75	306	99	32.4	997	196	19.6	13	0	0.0
1975-76	471	150	35.6	1,139	278	24.4	11	0	0.0
1976-77	668	320	47.9	1,354	355	26.2	18	3	16.7
1977-78	1,158	716	61.8	1,565	567	36.2	12	2	16.7
1978-79	1,338	864	64.6	1,748	671	38.4	16	4	25.0
1979-80	1,692	1,154	68.2	1,698	718	42.3	13	4	30.8
1980-81	1,581	1,043	66.0	1,996	933	46.7	12	2	16.7
1981-82	1,978	1,397	70.6	1,640	805	49.1	20	5	25.0
1982-83	2,267	1,701	75.0	1,724	903	52.2	14	4	28.6
TOTAL	12,970	7,560	58.3	17,676	6,003	34.0	197	31	15.7

FIELD: Physical Therapy

SOURCE: Earned Degrees Conferred Series, 1968-69 thru 1982-83
U.S. Office of Education (NCES)

TABLE 8-58

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1968-69	1,071	922	86.1	41	30	73.2
1969-70	1,091	922	84.5	49	32	65.3
1970-71	1,306	1,045	80.0	75	56	74.7
1971-72	1,483	1,182	79.7	55	30	54.5
1972-73	1,756	1,381	78.6	78	51	65.4
1973-74	1,900	1,497	78.8	111	77	69.4
1974-75	2,121	1,615	76.1	133	85	63.9
1975-76	2,091	1,620	77.5	167	113	67.7
1976-77	2,333	1,790	76.7	162	101	62.3
1977-78	2,418	1,903	78.7	258	184	71.3
1978-79	2,651	2,079	78.4	242	154	63.6
1979-80	2,372	1,845	77.8	282	203	72.0
1980-81	2,745	2,213	80.6	250	186	74.4
1981-82	2,736	2,200	80.4	317	233	73.5
1982-83	2,581	2,074	80.4	303	198	65.3
TOTAL	30,655	24,288	79.2	2,503	1,733	69.2

FIELD: Speech Pathology

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1982-83, U.S. Office of Education (NCES)

TABLE 8-59

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1982-83

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	1,427	1,251	87.7	845	690	81.7	70	22	31.4
1971-72	1,865	1,609	86.4	1,047	894	85.4	58	19	32.8
1972-73	2,574	2,259	87.8	1,417	1,175	82.9	69	23	33.3
1973-74	3,278	2,934	89.5	1,964	1,671	85.1	78	28	35.9
1974-75	3,732	3,345	89.6	2,377	2,011	84.6	71	30	42.3
1975-76	5,925	5,582	91.3	3,132	2,735	87.3	109	46	42.2
1976-77	3,864	3,555	92.0	3,027	2,711	89.6	96	49	51.0
1977-78	3,551	3,247	91.4	3,190	2,921	91.6	121	58	47.9
1978-79	3,554	3,297	92.8	3,496	3,180	91.0	113	60	53.1
1979-80	3,576	3,319	92.8	3,304	3,056	92.5	110	56	50.9
1980-81	3,445	3,225	93.6	3,226	2,982	92.4	112	59	52.7
1981-82	3,414	3,235	94.8	3,104	2,895	93.3	114	67	58.8
1982-83	3,041	2,877	94.6	2,859	2,649	92.7	93	62	66.7
TOTAL	41,244	37,735	91.5	32,988	29,570	89.6	1,214	579	47.7

FIELD: Public Health

SOURCE: Data compiled by the Association of Schools of Public Health, Washington, D.C., obtained by personal communication

TABLE 8-60

TOTAL ENROLLMENT IN SCHOOLS OF PUBLIC HEALTH BY SEX AND MINORITY, ACADEMIC YEARS 1974-75 THROUGH 1983-84 (U.S. Citizens Only)

Academic Year	Total Students Identified by Sex[1]	Female Students	Percent Female of Total Students Identified by Sex	Total Students Identified by Race[2]	Racial/Ethnic Category					Percent Minority of Total Students Identified by Race
					Black	Hispanic	Asian	Indian	Total Minority	
1974-75	4,980	2,307	46.3	4,515	351	76**	156	49	632	14.1
1975-76	5,411	2,646	48.9	5,268	348	309	218	59	934	17.7
1976-77	5,569	2,786	50.0	*	*	*	*	*	*	*
1977-78	5,781	2,999	51.9	*	*	*	*	*	*	*
1978-79	6,315	3,472	55.0	*	*	*	*	*	*	*
1979-80	6,523	3,677	56.4	6,485	415	173**	408	68	1,064	16.4
1980-81	5,994	3,472	57.9	5,994	379	242	393	88	1,102	18.4
1981-82	7,366	4,350	59.1	6,504	376	271	335	82	1,064	16.4
1982-83	7,614	4,624	60.7	7,005	403	359	368	70	1,200	17.1
1983-84	8,937	5,152	58.3	6,895	357	388	313	59	1,117	16.2

[1] Counts of students not identified by sex in the years listed are: 1974-75, 92; 1975-76, 4; 1976-77, 28; 1977-78, 23; 1989-79, 25; 1979-80, 9; 1980-81, 53; 1981-82, 0; 1982-83, 1.

[2] Counts of students not identified by race in the years listed are: 1974-75, 557; 1975-76, 147; 1979-80, 47; 1980-81, 53; 1981-82, 862; 1982-83, 610.

* Not Available

**Puerto Rican not included.

FIELD: Medical and Health

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 8-61

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE MEDICAL, HEALTH AND VETERINARY MEDICAL SCIENCES BY OCCUPPTIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1984

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Health Science	1,522	589	38.7	192	12.6	80	5.3	108	7.1	27	1.8	45	3.0	12	0.8	1,330	87.4
Medical Officer	26,986	4,805	17.8	4,702	17.4	1,191	4.4	787	2.9	1,305	4.8	2,570	9.5	40	0.1	22,284	82.6
Physician's Assistant	943	223	23.6	217	23.0	76	8.1	87	9.2	37	4.1	13	1.4	78	8.3	726	77.0
Nurse	39,875	36,776	92.2	9,244	23.2	8,728	21.9	5,181	13.0	1,350	3.4	2,127	5.3	586	1.5	30,631	76.8
Nurse Anesthetist	550	341	62.0	67	12.2	51	9.3	38	6.9	19	3.5	10	1.8	0	0.0	483	87.8
Dietitian & Nutritionist	1,586	1,526	96.2	326	28.6	315	19.9	178	11.2	68	4.3	70	4.4	10	0.6	1,260	79.4
Occupational Therapist	784	696	88.8	108	13.8	94	12.0	49	6.5	26	3.3	31	4.0	2	0.3	676	86.2
Physical Therapist	671	470	70.0	105	15.6	72	10.7	48	7.2	45	6.7	12	1.8	0	0.0	566	84.4
Corrective Therapist	541	126	23.3	139	25.7	30	5.5	120	22.2	8	1.5	9	1.7	2	0.4	402	74.3
Manual Arts Therapist	277	20	7.2	32	11.6	2	0.7	25	9.2	4	1.4	1	0.4	2	0.7	245	88.4
Rec./Creative Arts Therapist	708	287	40.5	123	17.4	39	5.5	97	13.7	20	2.8	4	0.6	2	0.3	585	82.6
Educational Therapist	101	59	58.4	17	16.8	11	10.9	17	16.8	0	0.0	0	0.0	0	0.0	84	83.2
Medical Technologist	5,169	3,573	69.1	1,155	22.3	759	14.7	552	10.7	217	4.2	340	6.6	46	0.9	4,014	77.7
Medical Technician	2,777	1,634	58.8	1,013	36.5	604	21.8	690	24.8	141	5.1	92	3.3	90	3.2	1,764	63.5
Pathology Technician	641	443	69.1	196	30.6	116	18.1	139	21.7	31	4.8	21	3.3	5	0.8	445	69.4
Pharmacist	3,373	963	28.6	601	17.8	265	7.9	216	6.4	127	3.8	241	7.1	17	0.5	2,772	82.2
Pharmacy Technician	2,329	1,374	59.0	821	35.3	484	20.8	563	24.2	102	4.4	110	4.7	46	2.0	1,508	64.7
Optometrist	173	18	10.4	13	7.5	2	1.2	5	2.9	1	0.6	7	4.0	0	0.0	160	92.5
Speech Pathology & Audiol.	789	457	57.9	47	6.0	32	4.1	23	2.9	13	1.6	7	0.9	4	0.5	742	94.0
Podiatrist	167	18	10.8	19	11.4	7	4.2	11	6.6	2	1.2	5	3.0	1	0.6	148	88.6
Diagno./Radiol. Technologist	2,848	1,308	45.9	861	30.2	364	12.8	566	19.9	161	5.7	47	1.7	87	3.1	1,987	69.8
Theraputic Radiol. Tech.	116	88	75.9	34	29.3	28	24.1	23	19.8	6	5.2	3	2.6	2	1.7	82	70.7
Dental Officer	1,519	172	11.3	137	9.0	31	2.0	62	4.1	44	2.9	28	1.8	3	0.2	1,382	91.0
Dental Assistant	2,954	2,761	93.5	1,078	36.5	996	33.7	496	16.8	131	4.4	81	2.7	370	12.5	1,876	63.5
Dental Hygienist	390	380	97.4	48	12.3	47	12.1	26	6.7	11	2.8	10	2.6	1	0.3	342	87.7
Dental Lab. Aid & Tech.	810	95	11.7	236	29.1	36	4.4	122	15.1	64	7.9	41	5.1	9	1.1	574	70.9
Industrial Hygienist	888	171	19.3	124	14.0	27	3.0	58	6.5	25	2.8	40	4.5	1	0.1	764	86.0
Veterinary Med. Scientist	2,118	135	6.4	369	17.4	29	1.4	114	5.4	58	2.7	190	9.0	7	0.3	1,749	82.6
Health System Administration	514	69	13.4	103	20.0	22	4.3	24	4.7	8	1.6	1	0.2	70	13.6	411	80.0
Health System Specialist	737	200	27.1	98	13.3	34	4.6	50	6.8	14	1.9	8	1.1	26	3.5	639	86.7

CHAPTER 9

SOCIAL AND BEHAVIORAL SCIENCES

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FIELD: Social Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 9-1

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Social Sciences, Subtotal	37,197	3,754	10.1	20,186	4,143	20.5	19,440	5,705	29.3	6,055	2,380	39.3	5,895	2,407	40.8
Communications[1]	140	27	19.3	1,134	288	25.4	1,259	447	35.5	252	103	40.9	295	105	41.2
Anthropology	2,503	563	22.5	1,904	651	34.2	1,264	795	62.9	373	175	46.9	335	171	51.0
Area Studies	349	47	13.5	147	30	20.4	108	35	32.4	20	11	55.0	23	2	8.7
Criminology[4]							95	21	22.1	49	7	14.3	41	10	24.4
Demography										26	12	46.1	19	8	42.1
Economics	13,638	738	5.4	4,270	377	8.8	3,845	494	12.9	792	129	16.3	768	120	15.6
Econometrics[2]	381	17	4.5	137	6	4.4	108	8	7.4	21	4	19.0	27	4	14.8
Geography	1,973	143	7.2	910	84	9.2	632	110	17.4	121	37	30.6	114	21	18.4
International Relations	1,506	146	9.7	589	77	13.1	416	61	14.7	77	15	19.5	95	13	13.7
Political Science & Public Admin.[3]	8,147	685	8.4	2,344	337	14.4									
Political Science & Gov't[3]				1,241	208	16.8	2,534	517	20.4	397	83	20.9	419	97	23.2
Public Policy Studies[3]				267	40	15.0	783	145	18.5	68	26	38.2	54	20	37.0
Sociology	7,045	1,227	17.4	3,383	1,008	29.8	3,015	1,143	37.9	525	216	41.1	515	226	43.9
Statistics	479	26	5.5	212	24	11.3	184	39	21.2	47	5	10.6	39	11	28.2
Urban Studies	85	0	0.0	371	48	12.9	419	91	21.7	74	22	29.7	81	21	25.9
Social Sciences, General[6]	191	28	14.7	170	44	25.9	154	58	37.7	17	3	17.6	17	6	35.3
Social Sciences, Other	904	129	14.3	804	181	22.5	636	228	35.9	141	63	44.7	125	63	50.4

[1] Added in 1972. Broken into subfields in 1983, and numbers no longer included in the "Social Sciences Subtotal" after 1982.

[2] Originally shown as "Statistics, including Econometrics." In 1966, it was broken out into "Econometrics" and "Statistics".

[3] "Political Science" and "Public Administration" were divided into two subfields in 1976. Because a number of doctorate recipients reported on old forms in 1976 both the old and new fields were included that year. Broken out as "Political Science and Government" and "Policy Studies" in 1983. "Public Policy Studies" in 1984.

[4] Added in 1980.

[5] Added in 1970 as "Urban and Regional Planning". Renamed "Urban Studies" in 1984.

[6] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General" classification of their respective fields.

SOURCE: Summary Report: Doctorate Recipients from United States Universities, 1973 through 1984, National Research Council

TABLE 9-2

PH.D. DEGREES IN SELECTED SOCIAL SCIENCES BY CITIZENSHIP & RACE/ETHNICITY, 1973-1984

YEAR	Total	Non-Citizen Temp Visas	Citizens and Permanent Visa Non-Citizens						
			Total	Amer. Indian	Asian	Black	White	His-panic	Other & Unknown
ANTHROPOLOGY									
1973-76	1,518	137	1,381	9	17	26	1,149	15	165
1977-80	1,537	101	1,397	13	27	24	1,204	23	106
1981	369	25	329	1	4	7	283	9	25
1982	333	30	295		4	7	268	7	10
1983	373	24	335	2	2	7	306	8	10
1984	335	28	289	2	5	10	258	5	10
1973-84	4,465	345	4,102	27	59	81	3,513	67	346
SOCIOLOGY									
1973-76	2,658	255	2,403	8	46	97	1,924	22	306
1977-80	2,569	245	2,278	20	66	116	1,910	57	109
1981	603	69	520		18	25	444	15	18
1982	568	54	494	2	19	29	414	18	12
1983	525	64	436		10	26	377	11	12
1984	515	62	434	1	11	28	373	17	4
1973-84	7,438	749	6,565	31	170	321	5,442	140	461
ECONOMICS									
1973-76	3,461	816	2,645	8	90	30	2,214	16	287
1977-80	3,112	761	2,262	7	118	47	1,911	33	146
1981	807	199	575	2	32	16	477	12	36
1982	735	195	491		36	18	409	12	16
1983	792	205	549		36	15	475	8	15
1984	768	239	496	1	32	20	240	12	11
1973-84	9,675	2,415	7,018	18	344	146	5,726	93	511
POLITICAL SCIENCE									
1973-76	628	88	540	3	9	14	477	8	29
1977-80	2,243	227	1,943	6	48	100	1,639	37	113
1981	445	72	373		15	25	305	8	20
1982	459	60	372	1	10	24	311	10	16
1983	397	55	322	1	8	18	266	11	18
1984	419	65	328		13	20	266	10	19
1973-84	4,591	567	3,878	11	103	201	3,264	84	215

FIELD: Social Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1984 Summary Report, Doctorate Recipients from United States Universities, National Research Council

TABLE 9-3

NUMBER OF Ph.D. RECIPIENTS IN THE SOCIAL SCIENCES BY TYPE OF CITIZENSHIP, 1960-1984

YEAR	TOTAL	U.S.	FOREIGN			Citizenship not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	1,710	1,488	204	51	153	18
1961	1,810	1,574	204	38	166	32
1962	1,925	1,647	240	30	210	38
1963	2,035	1,759	230	59	171	46
1964	2,299	1,951	283	70	213	65
1965	2,379	2,028	315	75	240	36
1966	2,697	2,266	361	80	281	70
1967	3,160	2,666	414	126	288	80
1968	3,534	3,029	433	122	311	72
1969	4,036	3,452	505	152	353	79
1970	4,616	3,926	634	204	430	56
1971	5,285	4,503	718	242	476	64
1972	5,621	4,738	771	265	506	112
1973	5,945	4,986	846	258	588	113
1974	6,017	4,919	815	226	589	283
1975	6,209	5,253	839	228	611	117
1976	6,373	5,434	834	195	639	105
1977	6,365	5,340	805	203	602	220
1978	6,057	5,033	735	202	533	289
1979	5,943	4,957	736	179	557	250
1980	6,253	5,296	726	200	526	231
1981	6,505	5,463	772	200	572	270
1982	6,250	5,112	788	201	587	350
1983	6,055	5,020	757	187	570	276
1984	5,895	4,750	828	194	634	317

FIELD: Social and Behavioral Sciences

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 9-4

SOCIAL AND BEHAVIORAL SCIENTISTS AND SOCIAL WORKERS BY BROAD FIELD, SEX AND RACE/ETHNICITY, 1980

	Psychologists		Economists		Sociologists		Other Social Scientists		Social Workers	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	92,929	100.00	95,565	100.00	2,550	100.00	13,477	100.00	459,984	100.00
MALES	49,102	52.84	67,218	70.34	1,489	58.39	8,177	60.67	161,258	35.06
White*	44,635	48.03	61,773	64.64	1,294	50.75	7,483	55.52	118,446	25.75
Black*	2,362	2.54	2,096	2.19	111	4.35	214	1.59	26,559	5.77
Indian/Alaskan Native*	143	0.15	169	0.18	0	0.00	38	0.28	1,623	0.35
Asian/Pacific Isl.*	515	0.55	1,599	1.67	44	1.73	172	1.28	1,601	0.57
Other Race*	68	0.07	98	0.10	0	0.00	19	0.14	271	0.06
Hispanic	1,379	1.48	1,483	1.55	40	1.57	251	1.86	11,758	2.56
FEMALES	43,827	47.16	28,347	29.66	1,061	41.66	5,300	39.33	298,726	64.94
White*	37,766	40.64	25,241	26.41	927	36.35	4,739	35.16	215,573	46.87
Black*	4,100	4.41	1,828	1.91	42	1.65	242	1.80	60,946	13.25
Indian/Alaskan Native*	193	0.21	68	0.07	12	0.47	30	0.22	2,565	0.56
Asian/Pacific Isl.*	546	0.59	565	0.59	48	1.88	95	0.70	3,765	0.82
Other Race*	94	0.10	37	0.04	0	0.00	5	0.04	403	0.09
Hispanic	1,128	1.21	608	0.64	32	1.25	189	1.40	15,474	3.36

* Non-Hispanic

FIELD: Social Sciences, Psychology Welfare

SOURCE: Federal Civilian Workforce Statistics, Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 9-5

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE SOCIAL SCIENCES, PSYCHOLOGY AND WELFARE BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 30, 1984

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
Social Science	2,665	975	36.6	600	22.5	281	10.5	431	16.2	96	3.6	38	1.4	35	1.3	2,065	77.5
Economics	5,702	1,127	19.8	460	8.1	171	3.0	235	4.1	92	1.6	122	2.1	11	0.2	5,242	91.9
Foreign Affairs	3,579	643	18.0	349	9.8	110	3.1	176	4.9	87	2.4	81	2.3	5	0.1	3,230	90.2
International Relations	88	14	15.9	7	8.2	3	3.4	2	2.3	2	2.3	3	3.4	0	0.0	81	92.0
Manpower Research & Analysis	35	10	28.6	7	20.0	4	11.4	6	17.1	1	2.9	0	0.0	0	0.0	28	80.0
Geography	243	61	25.1	14	5.8	6	2.5	6	2.5	5	2.1	3	1.2	0	0.0	229	94.2
History	674	145	21.5	34	5.0	10	1.5	17	2.5	7	1.0	7	1.0	3	0.4	640	95.0
Psychology	3,875	931	24.0	242	6.2	96	2.5	112	2.9	62	1.6	47	1.2	21	0.5	3,633	93.8
Sociology	111	46	41.4	10	9.0	3	2.7	4	3.6	3	2.7	3	2.7	0	0.0	101	91.0
Social Work	4,053	1,938	47.8	958	23.6	554	13.7	639	15.8	154	3.8	55	1.4	110	2.7	3,095	76.4
General Anthropology	67	17	25.4	11	16.4	2	3.0	1	1.5	5	7.5	2	3.0	3	4.5	56	83.6
Archeology	637	197	30.9	26	4.1	4	0.6	0	0.0	14	2.2	1	0.2	11	1.7	611	95.9
Social Science Aid & Tech.	770	331	43.0	208	27.0	85	11.0	152	19.7	39	5.1	8	1.0	9	1.2	562	73.0
Economics Assistant	85	61	71.8	31	36.5	29	34.1	27	31.8	1	1.2	3	3.5	0	0.0	54	63.5
Psychology Aid & Tech.	1,171	465	39.7	302	26.2	94	8.2	237	23.3	30	2.6	7	0.6	8	0.7	849	73.8
Social Serv. Aid & Tech.	960	451	47.0	376	29.2	180	18.8	218	22.7	46	4.8	15	1.6	97	10.0	584	60.8
Social Sci. Student Trainee	43	30	69.8	17	39.5	15	34.9	12	27.9	4	9.3	1	2.3	0	0.0	26	60.5

FIELD: Social Work and Helping Services

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1982-83, U.S. Office of Education (NCES)

TABLE 9-6

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1982-83

YEAR	BACHELOR'S			MASTER'S			DOCTOR'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	4,690	3,538	75.4	6,148	3,710	60.3	126	39	36.9
1971-72	6,223	4,661	74.8	6,656	4,049	60.8	99	31	31.3
1972-73	8,182	6,035	73.7	6,896	4,353	63.1	111	29	26.1
1973-74	9,960	7,115	71.4	7,974	4,965	62.3	109	33	30.3
1974-75	10,784	8,049	74.6	8,852	5,527	62.4	135	48	35.5
1975-76	11,032	8,350	75.7	9,002	6,012	66.8	163	73	44.8
1976-77	11,673	9,035	77.4	9,596	6,549	68.3	131	55	42.0
1977-78	12,672	9,947	78.5	9,986	6,998	70.1	138	66	47.8
1978-79	13,180	10,608	80.5	9,893	7,025	71.0	136	61	44.9
1979-80	12,870	10,503	81.6	10,158	7,326	72.1	162	81	50.0
1980-81	12,410	10,303	83.0	10,240	7,626	74.5	193	104	53.9
1981-82	11,813	9,946	84.2	9,959	7,664	77.0	198	108	54.6
1982-83	11,445	9,647	84.3	9,456	7,487	79.2	215	124	57.7
TOTAL	136,934	107,737	78.7	114,816	79,291	69.1	1,916	852	44.5

FIELD: Sociology

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 9-7

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER's		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	85,039	48,441	57.0	6,115	1,871	30.6
1960-61 thru 1969-70	161,125	96,045	59.6	10,040	3,189	31.8
1970-71	33,662	19,959	59.3	1,809	677	37.4
1971-72	35,626	20,294	57.0	1,945	754	38.8
1972-73	35,994	20,249	56.3	1,923	777	40.4
1973-74	35,896	20,582	57.3	2,196	869	39.6
1974-75	31,817	18,487	58.1	2,112	808	38.3
1975-76	27,634	16,389	59.3	2,009	844	40.0
1976-77	24,713	15,034	60.8	1,830	812	44.4
1977-78	22,991	14,568	63.4	1,611	733	45.5
1978-79	20,545	13,390	65.2	1,415	670	47.4
1979-80	19,164	12,781	66.7	1,341	674	50.3
1980-81	17,272	12,025	69.6	1,240	650	52.4
1981-82	16,042	11,271	70.3	1,145	626	54.7
1982-83	14,105	9,832	69.7	1,112	627	56.4
TOTAL	571,961	349,549	61.1	37,844	14,581	38.5

FIELD: Sociology

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 9-8

DOCTORAL DEGREES BY SEX, 1920-1984

YEAR	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	2,788	441	15.8
FY 1960 thru FY 1969	2,532	442	17.5
FY 1970-72	1,725	344	19.9
FY 1973	599	154	25.7
FY 1974	645	184	28.5
FY 1975	680	210	30.9
FY 1976	734	223	30.4
FY 1977	725	237	32.7
FY 1978	610	224	36.7
FY 1979	632	232	36.7
FY 1980	602	231	38.4
FY 1981	603	242	40.1
FY 1982	568	214	37.7
FY 1983	525	216	41.1
FY 1984	515	226	43.9
TOTAL	14,483	3,820	26.4

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Anthropology and Sociology

SOURCE: Doctorate Recipients from United States Universities, Summary Reports 1975, 1977, 1978, 1980, 1983, and 1984, National Research Council

TABLE 9-9

PERCENT DISTRIBUTION OF DOCTORAL RECIPIENTS IN ANTHROPOLOGY AND SOCIOLOGY BY POSTDOCTORAL PRIMARY WORK ACTIVITY AND SEX, FY 1975 THRU FY 1984

POSTDOCTORAL PRIMARY WORK ACTIVITY	FY 1975		FY 1977		FY 1978		FY 1980		FY1983		FY1984	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Reseach and Development	14.5	19.3	20.2	19.4	21.3	20.1	29.6	28.3	23.8	22.0	31.2	29.5
Teaching	75.5	72.6	66.2	69.6	62.8	67.0	56.5	55.7	47.7	56.5	44.5	43.0
Administration	2.0	1.9	3.3	3.2	4.1	3.6	6.5	5.7	10.9	5.4	10.6	9.5
Professional Services to Individuals	1.2	0.9	2.9	1.8	2.2	1.0	1.9	2.4	7.0	5.9	5.0	8.0
Other	0.4	1.4	0.9	0.9	1.1	1.5	1.9	1.9	4.3	4.3	1.8	3.5
Activity Unknown	6.5	3.8	6.6	5.1	8.5	6.7	3.7	6.1	6.3	5.9	6.9	6.5

FIELD: Sociology

SOURCE: ASA FOOTNOTES, American Sociological Association, December 1982

TABLE 9-10

FACULTY IN GRADUATE SOCIOLOGY DEPARTMENTS BY RANK, SEX AND MINORITY GROUP 1970-74, 1981

Rank	Year	% Women	% Black	% Indian American	% Hispanic	% Asian American	Total Faculty
Professor	1970	4	2	—	—	—	900
	1971	4	2	—	—	—	1079
	1972	5.4	1.9	0.2	0.2	1.1	1029
	1973	5.8	2.5	0.1	0.4	2.1	1029
	1974	5.6	2.6	0.0	0.5	0.3	1028
	1981	9.1	2.8	0.0	0.7	3.7	1062
Associate Professor	1970	10	3	—	—	—	672
	1971	11	3	—	—	—	744
	1972	11.4	2.8	0.5	0.5	1.4	647
	1973	12.0	3.0	0.0	1.0	3.3	735
	1974	13.5	4.1	0.0	1.5	2.3	748
	1981	15.5	3.1	0.0	1.1	2.4	942
Assistant Professor	1970	13	2	—	—	—	996
	1971	12	3	—	—	—	1163
	1972	17.0	2.9	0.5	1.0	2.1	1024
	1973	20.0	3.7	0.3	0.9	2.6	1307
	1974	23.7	4.5	0.5	1.1	2.7	1171
	1981	35.3	6.4	0.1	1.7	1.2	762
Instructor	1970	16	9	—	—	—	212
	1971	29	8	—	—	—	106
	1972	34.3	9.1	0.0	1.0	0.0	99
	1973	36.6	6.0	0.0	0.9	1.2	336
	1974	37.1	10.3	0.0	0.7	0.4	272
	1981	51.9	14.8	0.0	1.9	0.0	54
TOTAL*	1970	9	3	—	—	—	2946
	1971	10	3	—	—	—	3249
	1972	12.4	3.4	0.5	0.6	1.4	2878
	1973	16.9	3.8	0.1	0.9	2.4	3726
	1974	18.5	4.9	0.2	1.0	2.2	3490
	1981	19.1	4.1	0.0	1.1	2.2	2820

*Lecturers included in total for 1970-1974

Data for 1972-74 taken from Joan R. Harris, "Women and Minorities in Sociology: Findings From Annual ASA Audit," *FOOTNOTES*, Volume 3, Number 1, January 1975.

FIELD: Anthropology

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 9-11

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	3,902	1,847	47.3	1,091	338	31.0
1960-61 thru 1969-70	16,264	8,729	53.7	3,093	1,142	36.9
1970-71	4,386	2,433	55.5	766	337	44.0
1971-72	5,147	2,802	54.4	818	363	44.4
1972-73	5,625	3,052	54.3	807	348	43.1
1973-74	6,002	3,329	55.5	885	388	43.8
1974-75	5,624	3,210	57.0	993	473	47.7
1975-76	5,188	3,980	57.4	937	454	48.4
1976-77	4,833	2,832	58.6	965	457	47.4
1977-78	4,300	2,589	60.2	856	427	49.9
1978-79	3,998	2,449	61.3	830	423	51.0
1979-80	3,606	2,258	62.6	832	453	54.4
1980-81	3,330	2,108	63.3	869	502	57.8
1981-82	3,069	1,945	63.4	826	408	49.4
1982-83	2,806	1,814	64.7	788	425	53.9
TOTAL	78,080	44,377	56.8	15,356	6,938	45.2

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 9-12

DOCTORAL DEGREES BY SEX, 1920-1984

Y E A R	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	773	148	19.1
FY 1960 thru FY 1969	1,013	218	21.5
FY 1970-72	717	197	27.5
FY 1973	324	96	29.6
FY 1974	381	125	32.8
FY 1975	385	137	35.6
FY 1976	428	157	36.7
FY 1977	386	136	35.2
FY 1978	399	163	40.9
FY 1979	383	168	43.9
FY 1980	369	174	47.2
FY 1981	369	152	41.2
FY 1982	333	138	41.4
FY 1983	373	175	46.9
FY 1984	335	171	51.0
TOTAL	6,968	2,355	33.8

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Anthropology

SOURCE: 1985 Survey of Departments, American Anthropological Association, August 1985

TABLE 9-13

ANTHROPOLOGY FACULTY IN ALL DEPARTMENTS BY RANK AND MINORITY STATUS, 1984-85

ACADEMIC RANK	TOTAL	AM. INDIAN/ ALASKA NATIVE	% I	ASIAN/ PACIFIC ISL.	% A	BLACK	% B	HISPANIC	% H	MINORITY TOTAL	% MINORITY
Professor	787	6	0.8	16	2.0	13	1.7	15	1.9	50	6.4
Associate Professor	583	5	0.9	12	2.1	13	2.2	12	2.1	42	7.2
Assistant Professor	375	1	0.3	2	0.5	7	1.9	2	0.5	12	3.2
Instructor	28	1	3.6	2	7.1	7	25.0	2	7.1	12	42.9
TOTAL	1,773	13	0.7	32	1.8	40	2.3	31	1.7	116	6.5

TABLE 9-14

ANTHROPOLOGY FACULTY IN ALL DEPARTMENTS BY TENURE STATUS, RANK AND SEX, 1984-85

ACADEMIC RANK	TENURED			TENURE TRACK			NON-TENURE TRACK			TOTAL		
	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W
Professor	782	134	17.1	3	0	0.0	2	2	100.0	787	136	17.3
Associate Professor	554	142	25.6	19	6	31.6	10	5	50.0	583	153	26.2
Assistant Professor	59	23	39.0	262	107	40.8	54	26	48.1	375	156	41.6
Instructor	2	2	100.0	5	3	60.0	21	7	33.3	28	12	42.9
TOTAL	1,397	301	21.5	289	116	40.1	87	40	46.0	1,773	457	25.8

FIELD: Psychology

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 9-15

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920–FY1972			FY1973–FY1977			FY1978–FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Psychology Subtotal	26,383	5,550	21.0	13,618	4,407	32.4	15,739	6,596	41.9	3,307	1,572	47.5	3,223	1,614	50.1
Clinical	6,764	1,533	22.7	5,582	1,309	23.5	5,649	2,394	42.4	1,209	572	47.3	1,164	581	49.9
Cognitive[6]										65	31	47.7	77	37	48.1
Comparative[3]	173	25	14.5	125	47	37.6	72	30	41.7	11	4	36.4	13	9	69.2
Counseling	1,270	272	21.4	1,167	372	31.9	1,582	682	43.1	432	199	46.1	460	229	49.8
Developmental[1]	941	439	4637	893	481	53.9	1,025	603	58.8	219	148	67.6	207	155	74.9
Educational	1,629	376	23.1	636	222	35.4	763	265	34.7	153	74	48.4	210	110	52.4
Exper. Comparative Physiological Psy.[3]	3,076	415	13.5												
Experimental[3]	3,042	513	16.9	1,738	488	25.8	1,422	358	25.2	209	81	38.8	169	70	41.4
Industrial & Organizational[5]	775	38	439	376	114	30.3	397	96	24.2	90	30	33.3	106	40	37.7
Personality[2]	447	112	25.1	296	107	36.1	212	97	45.8	32	9	28.1	25	12	48.0
Physiological[3]	888	152	17.1	630	172	27.3	528	144	27.3	94	27	28.7	73	20	27.4
Psychometrics	344	44	12.8	105	20	19.0	96	31	32.3	10	8	80.0	6	3	50.0
Quantitative[6]										14	4	28.6	17	5	29.4
School[2]	393	111	28.2	593	256	43.2	726	274	37.7	121	72	59.5	89	50	56.2
Social	1,945	423	21.7	1,063	312	29.4	967	405	41.9	191	103	53.9	157	82	52.2
Psychology, General[7]	4,100	941	23.0	1,091	368	33.7	1,029	520	42.0	287	130	45.3	268	137	51.1
Psychology, Other[7]	562	136	24.2	810	261	32.2	1,061	439	41.4	170	80	47.1	180	74	41.1
Human Engineering[4]	34	0	0.0												

[1] "Developmental and Gerontological" until 1983.
[2] Added in 1960.
[3] Experimental, Comparative & Physiological Psychology were broken out into three separate fields in 1962.
[4] Dropped in 1962. Included now with Psychology, Other.
[5] "Industrial and Personnel" until 1983.
[6] Added in 1983.
[7] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Psychology

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 9-16

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER's		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	89,724	38,479	42.9	16,669	5,072	30.4
1960-61 thru 1969-70	181,611	75,916	41.8	27,082	9,063	33.5
1970-71	38,469	17,151	44.6	4,438	1,651	37.2
1971-72	43,421	20,154	46.4	5,273	2,033	38.4
1972-73	48,096	22,986	47.8	5,882	2,367	40.2
1973-74	52,256	26,407	50.5	6,616	2,630	39.8
1974-75	51,436	27,103	52.7	7,104	3,045	42.9
1975-76	50,363	27,376	54.3	7,859	3,671	46.7
1976-77	47,373	26,820	56.6	8,301	3,988	48.0
1977-78	45,057	26,540	58.9	8,194	4,263	52.0
1978-79	43,012	26,363	61.3	8,031	4,343	54.1
1979-80	42,513	26,923	63.3	7,861	4,464	56.8
1980-81	40,833	27,538	65.0	7,998	4,640	58.0
1981-82	41,031	27,408	66.8	7,791	4,582	58.8
1982-83	40,364	27,259	67.5	8,378	5,140	61.4
TOTAL	855,559	443,423	51.8	137,467	60,953	44.3

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 9-17

DOCTORAL DEGREES BY SEX, 1920-1984

YEAR	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	9,157	1,692	18.5
FY 1960 thru FY 1969	10,960	2,264	20.7
FY 1970 thru FY 1972	6,266	1,574	25.1
FY 1973	2,444	716	29.3
FY 1974	2,587	791	30.6
FY 1975	2,749	873	31.8
FY 1976	2,878	946	32.9
FY 1977	2,960	1,081	36.5
FY 1978	3,049	1,123	36.8
FY 1979	3,081	1,257	40.8
FY 1980	3,098	1,310	42.3
FY 1981	3,357	1,472	43.9
FY 1982	3,154	1,434	45.5
FY 1983	3,307	1,572	47.5
FY 1984	3,223	1,614	50.1
TOTAL	62,270	19,719	31.7

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Psychology

SOURCE: Summary Report of 1984-85 Survey of Graduate Departments of Psychology, American Psychological Association, June 1985

TABLE 9-18

GRADUATE STUDENT ENROLLMENT IN DOCTORAL DEGREE PROGRAMS IN U.S. DEPARTMENTS OF PSYCHOLOGY AND ASSOCIATED FIELDS BY ENROLLMENT STATUS, SPECIALTY, SEX AND RACE/ETHNICITY, 1984-85

DOCTORAL DEGREE PROGRAM	RACE/ETHNICITY						
	WHITE	BLACK	HISPANIC	ASIAN	AMERICAN INDIAN	NOT SPECIFIED	TOTAL
PRACTICE SPECIALTIES							
Full-Time							
Men	3,666	190	160	53	14	277	4,360
H %	84.1	4.3	3.7	1.2	0.3	6.4	100.0
V %	43.0	33.2	37.8	29.6	41.2	40.6	41.8
Women	4,865	382	263	126	20	405	6,061
H %	80.3	6.3	4.3	2.1	0.3	4.6	100.0
V %	57.0	66.8	62.2	70.4	58.8	59.4	58.2
Part-Time							
Men	997	49	23	5	5	160	1,239
H %	80.5	3.9	1.9	0.4	0.4	12.9	100.0
V %	45.7	40.8	38.3	33.3	62.5	48.2	45.6
Women	1,183	71	37	10	3	172	1,476
H %	80.1	4.8	2.5	0.7	0.2	11.7	100.0
V %	54.3	59.2	61.7	66.7	37.5	51.8	54.4
RESEARCH SPECIALTIES							
Full-Time							
Men	2,638	84	83.	127	5	179	3,116
H %	84.7	2.7	2.7	4.0	0.2	5.7	100.0
V %	45.4	35.0	42.3	45.7	50.0	48.4	45.1
Women	3,177	156	113	151	5	191	3,793
H %	83.8	4.1	3.0	4.0	0.1	5.0	100.0
V %	54.6	65.0	57.7	54.3	50.0	51.6	54.9
Part-Time							
Men	520	42	7	10	0	72	651
H %	79.9	6.4	1.1	1.5	0.0	11.1	100.0
V %	41.2	33.6	36.8	40.0	0.0	45.3	40.9
Women	743	83	12	15	1	87	941
H %	79.0	8.8	1.3	1.6	0.1	9.2	100.0
V %	58.8	66.4	63.2	60.0	100.0	54.7	59.1

FIELD: Psychology

SOURCE: Summary Report of 1984-85 Survey of Graduate Departments of Psychology, American Psychological Association, June 1985

TABLE 9-19

GRADUATE STUDENT ENROLLMENT IN MASTER'S DEGREE PROGRAMS IN U.S. DEPARTMENTS OF PSYCHOLOGY AND ASSOCIATED FIELDS BY ENROLLMENT STATUS, SPECIALTY, SEX AND RACE/ETHNICITY, 1984-85

MASTER'S DEGREE PROGRAM	RACE/ETHNICITY						
	WHITE	BLACK	HISPANIC	ASIAN	AMERICAN INDIAN	NOT SPECIFIED	TOTAL
PRACTICE SPECIALTIES							
Full-Time							
Men	1,581	121	75	36	11	109	1,933
H %	81.8	6.2	3.9	1.9	0.6	5.6	100.0
V %	33.0	35.9	38.7	39.1	42.3	26.7	33.1
Women	3,203	216	119	56	15	299	3,908
H %	82.0	5.5	3.0	1.4	0.4	7.7	100.0
V %	67.0	64.1	61.3	60.9	57.7	73.3	66.9
Part-Time							
Men	1,607	126	67	13	14	161	1,988
H %	80.8	6.3	3.4	0.7	0.7	8.1	100.0
V %	34.3	39.1	38.3	26.5	33.3	36.0	34.7
Women	3,079	196	108	36	28	286	3,733
H %	82.5	5.2	2.9	1.0	0.7	7.7	100.0
V %	65.7	60.9	61.7	73.5	66.7	64.0	65.3
RESEARCH SPECIALTIES							
Full-Time							
Men	689	45	19	30	0	148	931
H %	74.0	4.8	2.0	3.2	0.0	16.0	100.0
V %	39.6	38.5	32.2	32.3	0.0	31.0	37.4
Women	1,052	72	40	63	2	329	1,558
H %	67.5	4.6	2.6	4.1	0.1	21.1	100.0
V %	60.4	61.5	67.8	67.7	100.0	69.0	62.6
Part-Time							
Men	1,607	126	67	13	147	161	1,998
H %	80.8	6.3	3.4	0.7	0.7	8.1	100.0
V %	34.3	39.1	38.3	26.5	33.3	36.0	34.7
Women	3,079	196	108	36	28	286	3,733
H %	82.5	5.2	2.9	1.0	0.7	7.7	100.0
V %	65.7	60.9	61.7	73.5	66.7	64.0	65.3

FIELD: PSYCHOLOGY

SOURCE: 1984 Doctorate Employment Survey, Preliminary Report, American Psychological Association

TABLE 9-20

EMPLOYMENT STATUS OF 1984 DOCTORATE RECIPIENTS BY SEX AND ETHNICITY

	Employed full time		Employed part time		Postdoctoral fellow		Unemployed, seeking		Unemployed, not seeking		Total
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N (100%)
All respondents	1591	(78.6)	142	(7.0)	235	(11.6)	37	(1.8)	20	(1.0)	2025
Sex											
Men	864	(84.8)	27	(2.6)	113	(11.1)	13	(1.3)	2	(0.2)	1019
Women	724	(72.2)	115	(11.5)	122	(12.2)	23	(2.3)	18	(1.8)	1002
Not specified	3	(75.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	4
Ethnicity											
White	1462	(78.5)	137	(7.4)	217	(11.7)	28	(1.5)	18	(1.0)	1862
Black	48	(84.2)	3	(5.3)	5	(8.8)	1	(1.8)	0	(0.0)	57
Hispanic	34	(75.6)	0	(0.0)	6	(13.3)	4	(8.9)	1	(2.2)	45
Asian	24	(68.6)	0	(0.0)	7	(20.0)	3	(8.6)	1	(2.9)	35
American Indian	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1
Not specified	22	(88.0)	2	(8.0)	0	(0.0)	1	(4.0)	0	(0.0)	25

SOURCE: "Census of Psychological Personnel: 1983", American Psychologist, December 1985, American Psychological Association

TABLE 9-21

SEX AND ETHNICITY OF PSYCHOLOGISTS INVOLVED IN HEALTH/MENTAL HEALTH SERVICES, BY HIGHEST DEGREE

Characteristic	Doctoral			Master's			Total*	
	N	Col. %	Emp. %	N	Col. %	Emp. %	N	Col. %
Sex								
Male	23,623	67.6	66.9	7,547	48.0	76.6	32,468	60.7
Female	11,315	32.4	73.0	8,153	51.9	80.1	20,927	39.2
Not specified	29	0.1	55.8	22	0.1	56.4	58	0.1
Ethnicity								
White	33,615	96.1	69.0	15,072	95.9	78.5	51,328	96.0
Black	687	2.0	65.4	391	2.5	72.7	1,148	2.1
Asian	350	1.0	59.9	107	0.7	74.3	474	0.9
American Indian	86	0.2	76.1	39	0.2	84.8	134	0.3
Not specified	229	0.7	58.9	113	0.7	72.4	369	0.7
Hispanic origin	558	1.6	77.4	277	1.8	78.7	878	1.6

FIELD: PSYCHOLOGY

SOURCE: "Census of Psychological Personnel: 1983", American Psychologist, December 1985, American Psychological Association

TABLE 9-22

SEX AND ETHNICITY OF PSYCHOLOGISTS EMPLOYED IN RESEARCH ACTIVITIES, BY HIGHEST DEGREE, 1982

Characteristic	Doctoral			Master's			Total*	
	N	Col %	Emp %	N	Col %	Emp %	N	Col %
Sex								
Male	20,027	72.7	56.7	3,004	56.9	30.5	23,704	69.7
Female	7,512	27.3	48.5	2,271	43.0	22.3	10,286	30.2
Not specified	24	0.1	46.2	7	0.1	17.9	32	0.1
Ethnicity								
White	26,281	95.3	54.0	5,031	95.2	26.2	32,427	95.3
Black	614	2.2	58.5	136	2.6	25.3	787	2.3
Asian	361	1.3	61.8	45	0.9	31.3	413	1.2
American Indian	72	0.3	63.7	21	0.4	45.7	102	0.3
Not specified	235	0.9	60.4	49	0.9	31.4	293	0.9
Hispanic origin	396	1.4	54.9	94	1.8	26.7	513	1.5

TABLE 9-23

SEX AND ETHNICITY OF PSYCHOLOGISTS IN EDUCATIONAL ACTIVITIES BY HIGHEST DEGREE, 1983

Characteristic	Doctoral			Master's			Total*	
	N	Col %	Emp %	N	Col %	Emp %	N	Col %
Sex								
Male	26,145	70.0	74.1	6,571	48.1	66.7	33,994	63.3
Female	11,150	29.9	72.0	7,087	51.8	69.6	19,624	36.6
Not specified	32	0.1	61.5	13	0.1	33.3	51	0.1
Ethnicity								
White	35,658	95.5	73.2	13,065	95.6	68.1	51,271	95.5
Black	856	2.3	81.5	388	2.8	72.1	1,316	2.5
Asian	435	1.2	74.5	96	0.7	66.7	545	1.0
American Indian	92	0.2	81.4	33	0.2	71.7	136	0.3
Not specified	286	0.8	73.5	89	0.7	57.1	401	0.7
Hispanic origin	526	1.4	73.0	203	1.5	57.7	775	1.4

SOURCE: Summary Report of 1984-85 Survey of Graduate Departments of Psychology, American Psychological Association, June 1985

TABLE 9-24

CHARACTERISTICS OF FACULTY IN U.S. GRADUATE DEPARTMENTS OF PSYCHOLOGY BY SEX AND RACE/ETHNICITY, 1984-85

FACULTY CHARACTERISTICS	Ph.D. DEPTS		MASTER'S DEPTS.		ALL DEPTS	
	No.	V %	No.	V %	No.	V %
NUMBER OF DEPARTMENTS	247	-	121	-	368	-
TOTAL FACULTY	5,872	100.0	1,860	100.0	7,732	100.0
Men	4,468	76.1	1,335	71.8	5,803	75.4
Women	1,368	23.3	509	27.4	2,033	24.0
Not Specified	36	0.6	15	0.8	52	0.6
	BY RACE					
White	5,402	92.0	1,738	93.4	7,786	91.8
Black	177	3.0	44	2.4	223	2.6
Hispanic	65	1.1	19	1.0	87	1.0
Asian	60	1.0	24	1.3	104	1.2
American Indian	10	0.2	2	0.1	12	0.1
Not Specified	158	2.7	33	1.8	266	3.2

FIELD: Economics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 9-25

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	113,153	11,039	9.8	9,218	996	10.8
1960-61 thru 1969-70	129,286	12,254	9.5	14,411	1,509	10.5
1970-71	17,137	1,923	11.2	1,997	262	13.1
1971-72	15,336	1,811	11.8	2,225	284	12.8
1972-73	14,867	2,069	13.9	2,231	283	12.7
1973-74	14,418	2,121	14.7	2,141	303	15.2
1974-75	14,114	2,439	17.3	2,133	325	15.2
1975-76	13,854	2,714	19.6	2,043	334	15.9
1976-77	15,295	3,503	22.9	2,158	383	17.7
1977-78	15,746	3,933	25.0	1,997	396	19.8
1978-79	16,530	4,555	27.5	1,960	392	20.0
1979-80	17,952	5,430	30.2	1,823	382	21.0
1980-81	18,754	5,717	30.5	1,911	444	23.2
1981-82	19,876	6,452	32.5	1,964	483	24.6
1982-83	20,517	6,826	33.3	1,972	469	23.8
TOTAL	457,845	72,971	15.9	50,234	7,245	14.4

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 9-26

DOCTORAL DEGREES BY SEX, 1920-1984

Y E A R	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	4,872	331	6.6
FY 1960 thru FY 1969	5,282	245	4.6
FY 1970-72	2,480	162	6.8
FY 1973	907	57	6.3
FY 1974	833	73	8.8
FY 1975	867	84	9.7
FY 1976	854	92	10.7
FY 1977	809	71	8.8
FY 1978	778	91	11.7
FY 1979	780	104	13.3
FY 1980	745	101	13.6
FY 1981	807	100	12.4
FY 1982	735	98	13.3
FY 1983	792	129	16.3
FY 1984	768	120	15.6
TOTAL	23,309	1,858	8.0

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Political Science

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 9-27

DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	74,124	13,777	18.6	8,103	1,233	15.2
1960-61 thru 1969-70	154,982	33,327	21.5	14,381	2,764	19.2
1970-71	27,636	5,564	20.1	2,318	479	21.4
1971-72	28,317	5,338	18.8	2,451	502	20.5
1972-73	30,246	5,919	19.6	2,399	480	20.0
1973-74	30,932	6,199	20.4	2,448	456	18.6
1974-75	29,314	6,610	22.5	2,333	476	20.4
1975-76	28,515	7,206	25.3	2,192	473	21.6
1976-77	26,411	7,444	28.2	2,222	504	22.6
1977-78	26,245	8,168	31.1	2,070	547	26.4
1978-79	25,817	8,620	33.4	2,038	558	27.4
1979-80	25,658	9,212	35.9	1,933	515	26.6
1980-81	24,977	9,181	36.8	1,875	533	28.4
1981-82	25,658	9,775	38.1	1,954	610	31.2
1982-83	25,791	10,133	39.3	1,829	543	29.7
TOTAL	584,623	146,472	25.1	50,551	10,673	21.1

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 9-28

DOCTORAL DEGREES BY SEX, 1920-1984

Y E A R	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	3,017	203	6.7
FY 1960 thru FY 1969	3,122	257	8.2
FY 1970-72	2,008	223	11.1
FY 1973	780	93	11.9
FY 1974	775	115	14.8
FY 1975	749	121	16.2
FY 1976	628	106	16.9
FY 1977	613	102	16.6
FY 1978	603	118	19.6
FY 1979	522	95	18.2
FY 1980	505	102	20.2
FY 1981	445	96	21.6
FY 1982	459	106	23.1
FY 1983	397	83	20.9
FY 1984	419	97	23.2
TOTAL	15,042	1,917	12.7

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Political Science

SOURCE: "Ph.D. Enrollments Continue to Decline", by Robert J-P. Hauck, PS, Winter, 1985

TABLE 9-29

FIRST-TIME ENROLLMENTS IN Ph.D. PROGRAMS IN POLITICAL SCIENCE, FALL 1974-84

YEAR	TOTAL	WOMEN		BLACK	
		NUMBER	%	NUMBER	%
Fall, 1984	936	264	28.2	48	5.1
Fall, 1983	838	230	27.4	51	6.1
Fall, 1982	772	208	26.9	39	5.1
Fall, 1981	1,042	299	28.7	76	7.3
Fall, 1980	1,068	301	28.2	104	9.7
Fall, 1979	1,100	305	27.7	101	9.2
Fall, 1978	1,051	255	24.3	102	9.7
Fall, 1977	1,182	270	22.8	111	9.4
Fall, 1976	1,064	274	25.8	100	9.4
Fall, 1975	1,174	270	23.0	129	11.0
Fall, 1974	1,443	342	23.7	131	9.1

TABLE 9-30

TOTAL ENROLLMENTS IN Ph. D. PROGRAMS IN POLITICAL SCIENCE, 1974-75 - 1984-85

YEAR	TOTAL	WOMEN		BLACK		FOREIGN	
		NUMBER	%	NUMBER	%	NUMBER	%
1984-85	4,994	1,353	27.1	274	5.5	1,345	26.9
1983-84	4,171	1,105	26.5	207	5.0	1,075	25.8
1982-83	*	*	*	*	*	*	*
1981-82	5,491	1,505	27.4	319	5.8	1,818	21.5
1980-81	5,756	1,415	24.6	373	6.5	1,212	21.1
1979-80	5,888	1,384	23.5	406	6.9	1,146	19.5
1978-79	5,742	1,258	21.9	432	7.5	948	16.5
1977-78	5,737	1,278	22.3	413	7.2	819	14.3
1976-77	5,462	1,209	22.1	402	7.4	813	14.9
1975-76	6,150	1,475	24.0	435	7.1	*	*
1974-75	6,150	1,250	20.3	435	7.1	*	*

Field: Political Science

Source: "Finding Jobs: Placement of Political Scientists, 1983-84" by Robert J.P. Hauck, PS Winter 1985, American Political Science Association

TABLE 9-31

PLACEMENT SUCCESS OF POLITICAL SCIENTISTS BY FIELDS OF SPECIALIZATION AND SEX, 1980-84

	Total					Men					Women				
	1980	1981	1982	1983	1984	1980	1981	1982	1983	1984	1980	1981	1982	1983	1984
Placement Success[a]															
American Government	74	85	71	99	80	75	85	73	100	79	71	83	66	96	86
Public Policy	64	94	81	60	83	61	100	87	54	88	78	75	67	75	71
Comparative/Area Studies	55	59	52	73	67	55	60	46	75	66	55	56	74	67	54
International Relations	64	57	52	66	67	62	54	51	75	62	80	79	61	31	93
Public Administration	97	91	100	73	90	96	100	100	62	89	100	80	67	100	91
Political Theory	57	68	42	43	60	47	65	41	45	58	65	78	57	30	71
Methodology	50	81	88	80	100	60	83	100	80	100	50	100	100	–	–
Other	100	100	100	85	100	100	43	100	29	100	100	100	100	67	100
Percentage of Those Placed[b]															
American Government	29	30	30	30	29	28	28	30	28	22	32	35	32	40	7
Public Policy	7	8	10	11	11	6	9	9	9	8	8	7	9	20	3
Comparative/Area Studies	22	21	20	19	22	22	20	18	20	15	21	22	23	15	6
International Relations	17	13	19	14	16	15	13	19	16	12	14	13	18	5	4
Public Administration	7	10	25	10	8	7	11	5	9	5	6	5	9	10	3
Political Theory	11	12	9	9	9	10	13	10	10	7	13	11	5	5	1
Methodology	1	3	2	1	1	1	3	3	1	1	0	4	–	–	–
Other	7	2	5	6	4	8	2	5	5	3	5	2	5	5	1

[a]Placement success measures number placed in a field as a percentage of total candidates in each of the respective fields.

[b]Percentage of those placed measures the total number placed in a particular field as a percentage of the total number placed in all fields.

TABLE 9-32

PLACEMENT OF POLITICAL SCIENTISTS BY TYPE OF HIRING INSTITUTION AND SEX, 1980-1984
(percent)

	Total					Men					Women				
	1980	1981	1982	1983	1984	1980	1981	1982	1983	1984	1980	1981	1982	1983	1984
Ph.D. department	31	36	29	34	37	32	36	29	32	36	38	35	31	40	40
M.A. department	17	18	20	18	17	16	18	20	18	19	20	13	18	15	12
Undergraduate political science	22	25	25	27	24	21	24	26	27	24	26	33	21	29	27
Undergraduate social science	4	2	4	1	3	4	2	3	–	2	5	–	6	8	3
2-year college	2	2	1	1	1	1	2	3	2	2	2	1	6	–	–
Nonacademic	24	18	24	19	18	24	18	20	21	18	19	18	17	4	19
Total	100	101	99	100	100	99	100	101	100	101	100	100	99	96	101

FIELD: Political Science

SOURCE: "Finding Jobs: Placement of Political Scientists, 1983-84," by Robert J.P. Hauck, PS, Winter 1985, American Political Science Association

TABLE 9-33

PLACEMENT OF JOB CANDIDATES IN POLITICAL SCIENCE, 1980-1984

	TOTAL	MEN	WOMEN
Number of Firm Candidates			
1980	779	630	149
1981	667	596	101
1982	611	485	126
1983	523	390	133
1984	672	504	168
Number Placed			
1980	560	451	109
1981	511	437	75
1982	379	298	81
1983	414	326	88
1984	485	365	119
Placement Success (%)			
1980	68	68	68
1981	73	73	73
1982	62	61	64
1983	79	79	66
1984	72	72	71
Percent in Temporary Positions			
1980	33	32	35
1981	28	28	28
1982	36	37	36
1983	33	32	39
1984	33	33	34

TABLE 9-34

DEGREE COMPLETION AND PLACEMENT SUCCESS OF POLITICAL SCIENTISTS 1980-1984 (%)

	ABD					Ph.D.				
	1980	81	82	83	84	1980	81	82	83	84
Placement Success*										
Total	63	66	55	54	68	74	81	66	87	77
Men	61	63	54	53	64	75	83	63	87	80
Women	70	79	58	57	83	72	70	79	88	69
Percentage of Those Placedt										
Total	46	44	41	34	36	54	56	59	66	64
Men	43	41	40	32	36	57	59	60	68	64
Women	57	54	45	43	38	43	46	55	57	62

* Placement success measures number placed within each category as a percentage of the total candidates within each category.
† Percentages of those placed measures the number placed within each category as a percentage of total number placed in all categories.

SOURCE: "Black Political Scientists: Where are the New Ph.Ds?", by Maurice Woodard and Michael B. Preston, PS, Winter 1985, American Political Science Association

TABLE 9-35

NUMBER OF BLACK POLITICAL SCIENCE FACULTY BY RANK, SEX AND EMPLOYMENT STATUS, 1983

RANK	MEN		WOMEN	
	Full-Time	Part-Time	Full-Time	Part-Time
Professor	26	4	3	0
Associate Professor	23	2	2	1
Assistant Professor	44	1	17	0
Instructor/Lecturer	6	10	0	3

CHAPTER 10

ARTS, HUMANITIES AND EDUCATION

ARTS AND HUMANITIES

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FIELD: Humanities

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1975, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 10-1

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920–FY1972			FY1973–FY1977			FY1978–FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Arts & Humanities Subtotal	60,012	12,574	21.0	24,858	8,119	32.7	19,546	7,777	39.8	3,494	1,530	43.8	3,528	1,586	45.0
History, Am., European, Gen. & Other[12]	15,556	2,076	13.3	5,480	1,066	19.5									
History, American[12]							1,403	328	23.4	224	73	32.6	239	83	34.7
History, European[12]							949	273	28.8	168	49	29.2	150	48	32.0
History of Science[1]	74	10	13.5	154	68	44.2	129	39	30.2	13	7	53.8	24	11	45.8
History, Gen. & Other[4,12,13]							1,328	356	26.8	211	70	33.2	203	64	31.5
Classis	2,236	682	30.5	405	142	35.1	299	102	34.1	44	17	38.6	57	22	38.6
Comparative Literature[10]				308	165	53.6	568	332	58.5	124	72	58.1	133	83	62.4
Linguistics	1,502	358	23.8	910	343	37.7	878	385	43.8	164	86	52.4	160	82	51.3
Speech & Debate[5]	4,357	717	16.5	670	188	28.1	261	94	36.0	48	25	52.4	41	14	34.2
Letters, General[16]										3	2	66.7	14	6	42.9
Letters, Other[16]										19	9	47.4	31	19	61.3
American Studies[8]				242	79	32.6	344	164	47.7	98	45	45.9	76	33	43.4
Archeology	314	114	36.3	109	48	44.0	141	66	48.2	30	19	63.3	31	20	64.5
Art, Fine & Applied[6]	889	246	27.7	20	4	20.0									
Art History & Criticism[6]	346	155	44.8	678	351	51.8	756	487	64.4	150	101	67.3	141	104	73.8
Music	2,501	348	13.9	1,866	413	22.1	1,958	563	28.8	391	122	31.2	442	137	31.0
Philosophy[9]	5,133	631	12.3	1,909	310	16.2	1,648	272	16.5	242	64	26.4	214	47	22.0
Religion[11]				888	289	32.5	703	140	19.9	173	34	19.7	178	48	27.0
Theatre							386	154	39.9	107	44	78.5	101	47	46.5
Amer. & Eng. Lang. & Lit.[2]	11,782	2,715	23.0												
American Lang. & Lit.[2]	779	235	30.2	1,229	460	37.4	928	438	47.2	173	101	58.4	189	93	49.2
English Lang. & Lit.[2]	3,867	1,236	32.0	5,134	2,101	40.9	3,548	1,766	47.8	541	275	50.8	545	316	58.0
French Lang. & Lit.[3]	1,529	661	43.2	1,239	771	62.2	818	556	68.0	121	86	71.1	108	75	69.4
German Lang. & Lit.[3]	1,142	335	29.3	847	394	46.5	481	264	54.9	77	47	61.0	80	41	51.3
Italian Lang. & Lit.[3]	108	34	31.5	117	43	36.8	86	43	50.0	22	10	45.5	16	12	75.0
Spanish Lang. & Lit.[3,14]	1,338	451	33.8	1,151	496	43.1	861	469	51.0	161	91	56.5	144	79	54.9
Russian Lang. & Lit.[3]	275	85	31.1	394	123	31.2	177	101	57.1	24	13	54.2	33	14	42.4
Slavic Lang. & Lit.[3,15]	48	11	22.9							9	4	44.4	12	9	75.0
Chinese Lang. & Lit.[15]										16	7	43.8	13	8	61.5
Japanese Lang. & Lit.[15]										5	2	40.0	12	10	83.3
Hebrew Lang. & Lit.[15]										11	1	9.1	13	3	23.1
Arabic Lang. & Lit.[15]										8	2	25.0	8	2	25.0
Other Languages[3]	5,161	1,330	25.8	552	161	29.2	487	185	38.0	50	23	46.0	53	21	39.6
Humanities, General[7]	415	57	13.7	117	46	39.3	108	55	50.9	17	7	41.2	22	11	50.0
Humanities, Other	660	176	26.7	630	271	43.0	254	117	46.1	50	22	44.0	45	24	53.3

[1] Added in 1970 as "History and Philosophy of Science." Renamed "History of Science" in 1984. [2] In 1968, this specification was separated. [3] Shown as "Modern Foreign Language, Unspecified" until 1965; as "Other Languages" in 1979, and separated in 1983. [4] Name changed from "Foreign Language & Lit., Classical" in 1966 and renamed "classics" in 1983. [5] Originally specified as "Speech as a Dramatic Art." In 1962, "Dramatic Arts" was added. [6] In 1968, "Art, Fine & Applied" was broken out into "Art, Applied" & "Art, History & Criticism". [7] Subfield were not specified until FY 1958. [8] Added in 1975. [9] Added in 1973. [10] Added in 1976. [11] Added in 1978 as "Theater and Theater Criticism". Renamed "Theater" in 1983. [12] Separated into "History, American," "History, European," and "History, Other" in 1978. [13] "History, Other" combined with "history, General" in 1983. [14] "Spanish and Portuguese" prior to 1983. [15] Separated from "Other Languages" in 1983. [16] Added in 1983.

FIELD: Linguistics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1982-83, U.S. Office of Education (NCES)

TABLE 10-2

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1982-83

YEAR	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru† 1959-60	171	76	44.4	287	113	39.4
1960-61 thru 1969-70	1,127	575	51.0	2,066	859	42.8
1970-71	254	171	67.3	352	179	50.8
1971-72	296	186	62.8	373	199	53.4
1972-73	443	290	65.5	452	228	50.4
1973-74	431	315	73.1	455	248	54.5
1974-75	434	305	70.3	506	279	55.1
1975-76	534	371	69.5	523	313	59.8
1976-77	564	399	70.7	552	326	59.1
1977-78	596	408	68.5	522	313	60.0
1978-79	585	408	69.7	503	297	59.0
1979-80	553	418	75.6	522	315	60.3
1980-81	551	408	74.0	498	307	61.6
1981-82	534	376	70.4	516	305	59.1
1982-83	472	355	75.2	597	357	59.8
TOTAL	7,545	5,061	67.1	8,724	4,643	53.2

† Includes data beginning in 1955-56 when linguistics was identified as a separate field.

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1984, National Research Council

TABLE 10-3

DOCTORAL DEGREES BY SEX, 1920-1984

YEAR	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	293	68	23.2
FY 1960 thru FY 1969	738	167	22.6
FY 1970-72	471	123	26.1
FY 1973	207	65	31.4
FY 1974	167	68	40.7
FY 1975	194	70	36.1
FY 1976	152	70	46.1
FY 1977	190	73	38.4
FY 1978	175	65	37.1
FY 1979	155	77	49.7
FY 1980	182	75	41.2
FY 1981	176	78	44.3
FY 1982	191	90	47.1
FY 1983	164	86	52.4
FY 1984	160	82	51.3
TOTAL	3,615	1,257	34.8

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Education

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1984, National Research Council

TABLE 10-4

DOCTORATES AWARDED FROM 1920 TO 1984 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978-FY1982			FY1983			FY1984		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
EDUCATION, TOTAL[1]	69,377	13,878	20.0	37,033	11,136	30.1	36,851	16,386	44.5	7,147	3,604	50.4	6,780	3,457	51.0
Curriculum and Instruction													854	543	63.6
Educational Admin. & Supervision[5]	12,610	1,053	8.4	7,544	1,188	15.7	7,560	2,451	32.4	1,619	632	39.0	1,554	618	39.8
Educational Media[4]	624	67	10.7	449	78	17.4	410	138	33.7	88	35	39.8	82	30	36.6
Education Statistics & Research[12]	547	188	34.4	3,800	1,446	38.1	4,132	2,101	50.9	86	40	46.5	105	48	45.7
Education Testing, Evaluation, Meas.[12]	691	110	15.9	542	150	27.7	474	194	40.9	51	20	39.2	56	25	44.6
Educational/School Psychology[4]	3,165	924	29.2	2,402	952	39.6	2,227	1,111	49.9	273	211	77.3	339	184	54.3
Social Foundations[4]	2,361	535	22.7	1,056	308	29.2	1,113	416	37.4	142	81	63.0	151	53	35.1
Special Education[4]	1,918	535	27.9	1,499	619	41.3	1,633	971	59.5	349	229	65.6	313	220	70.3
Student Counselling & Personnel Serv.[4]	4,909	1,046	21.3	3,412	1,142	33.5	2,848	1,287	45.2	502	252	50.2	390	188	48.2
Higher Education[3]	522	96	18.4	3,053	729	23.9	3,299	1,321	40.0	632	304	48.1	659	333	50.9
Pre-Elementary Education[10]										63	48	76.2	54	44	81.5
Elementary Education, General[2]	2,644	1,096	41.5	1,240	703	56.7	877	607	69.2	111	85	76.6	87	63	72.4
Secondary Education, General[2]	2,212	375	17.0	973	268	27.5	695	299	43.0	87	48	55.2	62	36	58.1
Adult Ed. & Continuing Ed.[3]	251	52	20.7	779	191	24.5	1,094	484	44.2	221	110	49.8	218	119	54.6
Teaching Field-Agriculture[2]	459	8	1.7	138	2	1.4	140	11	7.9	47	8	17.0	47	7	14.9
Teaching Field-Arts[6]	369	103	27.9	273	106	38.8	261	145	55.9	58	32	55.2	41	21	51.2
Teaching Field-Business[6]	685	201	29.3	408	142	34.8	274	124	45.3	62	28	45.2	52	36	69.2
Teaching Field-English[6]	563	164	29.1	431	204	47.3	364	211	58.2	76	50	65.8	72	50	69.4
Teaching Field-Foreign Languages[6]	168	49	29.2	152	73	48.0	170	91	53.5	25	10	40.0	25	14	56.0
Teaching Field-Health[10]										99	57	57.6	94	68	72.3
Teaching Field-Home Economics[6]	256	248	96.9	169	164	97.0	140	138	98.6	25	24	96.0	26	25	96.2
Teaching Field-Industrial Arts[6]	527	2	0.4	257	5	1.9	165	8	4.9	19	2	10.5	27	5	18.5
Teaching Field-Mathematics[6]	908	150	16.5	546	140	25.6	328	132	40.2	62	40	64.5	64	30	46.9
Teaching Field-Music[6]	906	125	13.8	530	131	24.5	463	166	35.9	112	41	36.6	92	36	39.1
Teaching Field-Nursing[11]							89	88	98.9	17	17	100.0	21	19	90.5
Physical Education[13]	2,861	783	27.4	1,725	513	29.8	1,753	696	39.7	236	106	44.9	219	88	40.2
Reading Education[8]				246	171	69.5	799	631	79.0	169	120	71.0	142	115	81.0
Science Education[2]	1,574	306	19.4	656	123	18.8	483	139	28.8	78	25	32.1	77	26	33.8
Social Science Education[6]	500	90	18.0	289	69	23.9	239	84	35.2	39	22	56.4	21	10	47.6
Speech Education[7]				55	27	49.1	70	46	65.7	2	2	100.0	10	7	70.0
Trade & Industrial Education[6]	461	26	5.6	882	166	18.8	1,032	379	36.7	138	55	39.9	117	33	28.2
Other Teaching Fields[9]	750	309	41.2	569	325	57.1	258	170	65.9	64	60	46.1	23	12	52.2
Education, General[1]	24,816	4,896	19.7	1,730	587	33.9	2,114	997	47.2	347	175	50.4	311	161	51.8
Education, Other[4]	1,117	341	30.5	975	444	45.5	1,113	616	55.4	302	159	52.6	360	190	52.8

[1] "Education" originally listed under a single code. In 1960, single code broken out into 16 subfields. Cases coded under assigned "Education" code prior to 1960 were added to "Education, General". The 7 codes used prior to 1962 were converted. [2] Added in 1960. [3] Added in 1971. [4] Added in 1962. [5] Added in 1960 as "Administration". Changed in 1962 to "Admin. & Supervision". [6] Added in 1963. [7] Added in 1975. [8] Added in 1976. [9] Added in 1963 as "Other Special Field". In 1968 changed to "Other Fields" (meaning other teaching fields). [10] Added in 1983. [11] Added in 1980. [12] Name changed in 1983. [13] Name changed from "Physical Education, Health, and Recreation" to "Physical Education" in 1983.

FIELD: Education

SOURCE: Earned Degrees Conferred Series, 1970-71 thru 1982-83, U.S. Office of Education (NCES)

TABLE 10-5

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 - 1982-83

YEAR	BACHELOR'S			MASTER'S			Ph.D.		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	177,638	132,236	74.4	89,067	50,020	56.2	6,398	1,355	21.2
1971-72	192,368	142,492	74.0	98,280	56,355	57.3	7,041	1,660	23.6
1972-73	195,640	143,816	73.5	105,646	61,450	58.2	7,314	1,813	24.8
1973-74	186,623	137,088	73.5	112,739	67,553	59.9	7,293	1,977	27.5
1974-75	168,749	123,703	73.3	120,233	74,733	62.2	7,443	2,296	30.8
1975-76	156,528	114,026	72.8	128,410	82,591	64.3	7,769	2,593	33.4
1976-77	143,658	103,740	72.2	126,375	83,201	65.8	7,955	2,769	34.8
1977-78	137,742	99,842	72.5	118,957	80,548	67.7	7,586	2,956	39.0
1978-79	127,853	93,568	73.2	111,834	76,734	68.6	7,731	3,263	42.2
1979-80	120,680	89,214	73.9	103,720	72,762	70.2	7,940	3,521	44.3
1980-81	108,265	81,196	75.0	98,381	70,301	71.5	7,900	3,736	47.3
1981-82	101,063	76,678	75.9	93,104	67,333	72.3	7,676	3,727	48.6
1982-83	97,991	74,321	75.8	84,853	61,621	72.6	7,551	3,787	50.2
TOTAL	1,914,798	1,411,920	73.7	1,391,599	905,202	65.1	97,597	35,453	36.3

SOURCE: Affirmative Employment Statistics, U.S. Office of Personnel Management, September 30, 1984

TABLE 10-6

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN EDUCATION BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPTEMBER 1984

OCCUPATION SERIES	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Education & Training	1,106	465	42.0	166	15.0	81	7.3	73	6.6	19	1.7	7	0.6	67	6.1	940	85.0
Education & Vocational Training	18,578	11,599	62.4	3,234	17.4	2,235	12.0	1,366	7.4	406	2.2	254	1.4	1,208	6.5	15,344	82.6
Education Research & Program	652	270	41.4	164	25.2	89	13.7	138	21.2	17	2.6	4	0.6	5	0.8	488	74.9
Public Health Education	32	14	43.8	11	34.4	6	18.8	2	6.2	-	-	1	3.1	8	25.0	21	65.6

RECRUITMENT RESOURCES

American Studies

The Women's Committee of the American Studies Association has prepared a directory of about 250 women listed by field name, institutional affiliation, rank, area of expertise, teaching and administrative experience, publications and other notable career aspects. Included are the social sciences, writing, literature, music, art, architecture, mass media, popular culture, education and library science. The roster is available from Roberta K. Gladowski, American Studies Association, 4025 Chestnut Street/T7, University of Pennsylvania, Philadelphia, PA 19104. Women wishing to be added to the roster should submit their vita to the same address.

Architecture

The Alliance of Women in Architecture is gathering the names and addresses of women architects and students of architecture. Contact AWA, 18 East 13th Street, New York, NY 10003.

Asian Studies

The Association for Asian Studies has a Committee on the Role of Women in Asian Studies. Write the Committee c/o the Association for Asian Studies, One Lane Hall, University of Michigan, Ann Arbor, MI 48109.

Banking

The National Association of Bank Women has prepared a yearbook register of over 20,000 women in all areas withir the profession, used for recommendations for consultant appointments, speaking engagements and personal reference. Contact Ms. Sharon Pierce, Executive Manager, NABW, 111 E. Wacker Drive, Chicago, IL 60601.

Biochemistry/Biomedical Sciences

Biochemistry/Biomedical Sciences Registry is a fully computerized registry of women and minority group biomedical scientists for use as an aid in job placement and appointments to committees and review boards. Includes name, address, age, degree(s) and year, institution, field and four sub-specialties, publications, salary range desired, availability for scientific, academic, administrative or industrial job, experience, awards, etc. Information updated every two years. Users contact: Incenter Corporation, 2116 Noudain Street, Philadelphia, PA 19146. Registrants contact: Dr. Helen C. Davies, American Society of Biological Chemists, 9560 Rockville Pike, Bethesda, MD 20014.

Chemistry

The American Chemical Society has a general and a confidential employment service. Candidates registered with the services may indicate minority status on a voluntary basis. Identification within a given search will be provided an employer for affirmative action needs. Approximately 600-700 candidates are registered at any given time. About 250 have indicated they are female and/or members of minority groups. When minorities and/or women appear in any search, they are now automatically identified. Registration for the open service is free to ACS members and student affiliates. Because of extra handling required, an annual listing fee of $25 is charged for the confidential service. The minimum charge for any search service is $25. If records of candidates are supplied for review, the cost is $50. Contact Employment Aids Office, American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036. (Tel. 202-872-4528).

In the fall of 1974, the Women Chemists Committee of the American Chemical Society began an informal referral service to facilitate academic job placement. About 100 women ACS members receive announcements of job openings requiring a Ph.D. There is no fee. Contact: Women Chemists Committee, American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036. (Tel. 202-872-4456).

Communication

The Employment Clearinghouse is based in the Office of Community Affairs of the National Association of Broadcasters in Washington, DC and is supported by financial assistance from broadcasting networks and stations. ECH coordinates its operations with broadcast skills banks located in several cities throughout the United States. ECH offers the following services primarily to minorities and women interested in careers in broadcasting: Initial Career Counseling, Broadcast Job Referral Services, Information on Broadcast Careers and Follow-up Counseling. Contact: Employment Clearinghouse, Office of Community Affairs, National Association of Broadcasters, 1771 N Street, N.W., Washington, DC 20036.

Economics

The Committee on the Status of Women in the Economics Profession maintains a roster of women economists which includes the address, publications record, highest degree, school and date of highest degree, current position and employer, primary and secondary specialties, and current availability for each woman economist listed. An annual directory with quarterly updates is based upon the roster. Entries in the directory are indexed by specialty and by geographic location. Economic specialties are indexed by specialty and by geographic location. Economic specialties are coded as listed in the Journal of Economic Literature, with further verbal description. The charge for the directory is $20 to nonprofit institutions, and $30 to others, payable to the Committee on the Status of Women in the Economics Profession. Requests should be sent to Nancy D. Ruggles, ISPS, Box 16A, Yale Station, New Haven, CT 06520.

Engineering

The Society of Women Engineers has a roster of the members of the society including name, address, occupation, business and home phone numbers. All areas of the profession are represented, but it is used for membership services only. Job openings may be advertised in the SWE Newsletter which is subscribed to be more than 6,000 engineers in the U.S. and Canada. Information is available from: Society of Women Engineers, 345 East 47th Street, New York, NY 10017. (Tel. 212-644-7855).

Geography

The Committee on the Status of Women Geographers of the Association of American Geographers maintains a roster listing about 250 names, addresses, degrees, name and date of latest publication, Ph.D. dissertation or MA/MS thesis, current employment information and the individual's three major interests in geography. Contact Professor Susan Hanson, Dept. of Geography, Clark University, Worcester, MA 01610.

Geology

The Women Geoscientists Committee of the American Geological Institute has compiled a Roster of Women in the Geoscience Professions (3rd edition, January 1982). Its purposes are job placement, communication, education and appointment to advisory positions. Contact Chairman, Women Geoscientists Committee, American Geological Institute, 4220 King Street, Alexandria, VA 22302

Higher Education

Higher Education Administration Referral Service is a nonprofit organization which operates its registry as a general referral service for job placement for professional staff in higher educatior. It includes all exempt positions of a non-faculty nature. Special effort is made in canvassing potential registrants to include women and minority candidates, though they are not identified separately. It is a confidential and "equal opportunity" service. There is a small fee for registering and fees are charged to institutions using the service. Contact Higher Education Administration Referral Service, Suite 510, One Dupont Circle, N.W., Washington, DC 20036.

The Project on the Status and Education of Women serves as a clearinghouse for information on women in higher education and has developed materials on this subject, including legislative summaries, topical papers on re-entry women, sexual harrassment, minority women and other subjects; and a newsletter On Campus With Women. To receive a free publication list, contact the Project on the Status and Education of Women, Association of American Colleges, 1818 R Street, N.W., Washington, DC 20009.

History

The Committee on Women Historians of the American Historical Association has a published directory of over 2,000 women historians in all specialties including name, address, institutional affiliation, rank, degrees, institution, date of degree, dissertation subject, fields of specialization and publications. The directory is used to inform institutions about the availability of women in various fields of history for employment purposes as well as for conferences, book reviews, etc. Contact Assistant Executive Director, American Historical Association, 400 A Street, S.E., Washington, DC 20003.

A Directory of Black Historians & Others: Commentaries & Essays has been compiled by Dr. Gossie Hudson at Lincoln University. It includes information on blacks and non-blacks currently teaching black history, including addresses, positions, degrees and thesis topics. Extensively indexed, with breakouts by degree, field, sex, location, etc., it also includes a set of essays by historians on the field of black history. The major purposes of the directory are for education and research. The price is $12.50. Contact Vance Bibliographies, P.O. Box 229, Monticello, IL 61856.

The Roster of Minority Graduate Students in History is a list of doctoral candidates divided into five fields of study covering United States, Latin American, European, Asian and African history. Within each field, one page resumes of each person are available. The material covers all minorities, but not specifically women. It is meant to be an employment aid. Compiled biennially, it is available from the History Department University of North Florida, Jacksonville, FL 32216.

Law

The Association of American Law Schools Section on Women in Legal Education has compiled a roster of 93 women in legal education, arranged alphabetically by name, with current address. May be obtained from Association of American Law Schools, One Dupont Circle, N.W., Washington, DC 20036.

Medicine

The Faculty Roster of the Association of American Medical Colleges is a general computerized registry of 50,000 M.D.'s on medical school faculties, used primarily for research and policy planning. Data on women and minorities can be retrieved separately, but no individual names. The Faculty Roster is updated on a monthly basis. In a typical month, about 2,500 faculty records are either added or brought up to date. It is estimated that the roster includes more than ninety percent of all U.S. medical school faculty. Of the 116 U.S. medical schools, 112 regularly report to the AAMC their new accessions, updates and terminations. Contact Association of American Medical Colleges, One Dupont Circle, N.W., Washington, DC 20036

Modern Language

A Directory of Women Scholars in the Modern Languages has been compiled by the Modern Languages Association Commission on the Status of Women in the Profession. This directory of more than

2,600 women qualified in English and foreign languages, cross-referenced by fields of interest including administration, lists name, title, rank, present institutional affiliation, institution and date of highest degree, major publications, honors, memberships and two or three current fields of interest. Published in 1973, it is available for $10 from the Modern language Association of America, 62 Fifth Avenue, New York, NY 10011.

Music

College Music Society's Committee on the Status of Women in the Profession has issued various reports on the Status of Women in College Music. Direct inquiries on the Committee and the reports to: Craig Short, Executive Secretary, College Music Society, Regent Box 44, University of Colorado, Boulder, CO 80309.

Philology

The American Philological Association's Women's Classical Caucus maintains a mailing list of over 150 men and women within the Association in the specialities of linguistics, ancient history, philosophy, Greek and Latin literature and classical archaeology. It can be obtained from Professor Phyllis Culham, Dept. of History, U.S. Naval Academy, Annapolis, MD 21402.

Physics

A special recruitment resource in physics and astronomy is the Committee on the Status of Women in Physics, American Physical Society. Contact American Institute of Physics, Manpower Placement Registry, 335 East 45th Street, New York, NY 10017.

Political Science

Biographical Directory - 1972 lists 226 persons alphabetically and includes address, institutional affiliation, degrees and field of specialization. The fee is $3.50. Contact the National Conference of Black Political Scientists, Carolyn Williams, Treasurer, Dept. of Political Science, Xavier University, New Orleans, LA 70125.

The Committee on the Status of Women in the Profession of the American Political Science Association maintains a roster of approximately 800 women including name, address, position, degree and field, research interest, skills and experience, and an index by field. The fee is $5. Request Women in Political Science, 4th Edition (1976), American Political Science Association, 1527 New Hampshire Avenue, N.W., Washington, DC 20036. A fifth Edition will be available in 1982.

Psychology

A special recruitment resource in psychology is the 1981 Directory. Contact American Psychological Association, 1200 17th Street, N.W., Washington, DC 20036.

Public Affairs

The National Association of Schools of Public Affairs and Administration maintains a roster of its 215 member institutions including data on women and minority faculty and students. The roster can be used as an aid in communication, seeking employment, and by prospective graduate students seeking a supportive atmosphere. First compiled in 1969, it is updated every two years. The fee is $10. Available from the NASPAA, 1225 Connecticut Avenue, N.W., Suite 307, Washington, DC 20036.

Science

The National Institute of Science, a black scientific professional association, has a roster of 300-400 members, including faculty and students. Its main purpose is communication. The roster is updated annually. Contact Dr. L. Shelbert Smith, Executive Secretary, NIS, Chemistry Dept., Central State University, Wilberforce, OH 45384.

AWIS Newsletter provides a listing of jobs available in science and engineering and announces fellowship awards and federally-supported programs in science and engineering. It is published every other month. Each issue is mailed to the 3,500 AWIS members. Additional copies are distributed at science meetings throughout the country. Available for $35 per year, it is free to AWIS members. The AWIS Registry of more than 7,000 women scientists and engineers is computerized for rapid search. It contains biographical information on several thousand women scientists and is organized by specialty. For $60 per position, AWIS will send a list of women looking for employment in the designated field and established persons who may know of other qualified candidates. If the search produces fewer than four candidates, the fee is waived. Each search request must include a purchase order and a detailed statement of position requirements. Contact the Association for Women in Science, 2401 Virginia Avenue, N.W., Suite 303, N.W., Washington, DC 20037.

Sociology

The Guide to Graduate Departments of Sociology 1981 provides specific information on the output of graduate programs by listing the 1979-80 Ph.D.'s dissertation titles and current positions. Data are collected via a questionnaire sent to all known graduate departments in the U.S. and Canada. The volume, updated annually, is available for $10 from the American Sociological Association, 1722 N Street, N.W., Washington, DC 20036.

Theology

Placement News is a bi-monthly newsletter published by the Women's Theological Coalition for women in theology and ministry at the master's and doctoral levels. The editor is Mary Caldwell, 210 Herrick Road, Newton Centre, MA 01259.

GENERAL

Affirmative Action: A Comprehensive Recruitment Manual provides sources for minority group recruiting, including information on colleges with the largest numbers of Black, Asian, Hispanic and Native American Students. Also includes a list of minority media, a roster of predominantly black colleges, suggestions for recruiting and an extensive bibliography. Available for $15 ($14 prepaid) from Garrett Park Press, Garrett Park, MD 20896.

American Association of University Women has a listing of Professional Women's Groups, May 1981 which offers one or more of these services regarding employment opportunities: a roster of women for employers seeking female applicants, listings of job openings in their newsletters, financial aid and career information. This roster is available for $1 prepaid, from American Association of University Women, 2401 Virginia Avenue, N.W., Washington, DC 20037.

The Black Collegian Resume Service publishes the Monthly Resume File Reader and two Resume Books each year. The Resume File Reader contains pertinent data from each resume. It contains file number, major, university, graduation date, grade point average, career objective, etc. Full copies of the resume can be ordered by sending in the file number. Companies contact the students directly. The Resume Service is provided free to advertisers in The Black Collegian magazine. For more information contact Preston J. Edwards, Publisher, The Black Collegian, 1240 South Broad Street, New Orleans, LA 70125. (Tel. 504-821-5694).

Handbook for Recruiting at Minority Colleges, 1982-83 Edition, contains profiles of 94 four-year colleges and universities with predominant enrollments of minority students. It is used to locate and recruit graduates from predominantly minority colleges. Edited by Andre G. Beaumont and Rena D. Godbolt, it is available for $12.50 from College Placement Services, Inc., 62 Highland Avenue, Bethelehem, PA 18017.

Locating, Recruiting and Employing Women: An Equal Opportunity Approach by Cecelia Foxley lists some 300 women's organizations with talent banks or other employment/career assistance as well as a list of 600 women's counseling and placement centers. The price is $8.50 ($7.50 prepaid). The publication is available from Garrett Park Press, Garrett Park, MD 20896.

Minority Organizations: A National Directory lists approximately 3,200 national, regional and local organizations with largely minority memberships, or whose purpose is service to the minority community. Available for $15 ($14 prepaid) from Garrett Park Press, Garrett Park, MD 20896.

Native American Professional Resource Directory is a computerized roster of over 1,000 Native Americans published in 1973 for educational, communication and employment purposes. Names are listed alphabetically with address, tribe, position, expertise and education. Sponsored by the Bureau of Indian Affairs, the publication is available for $4.50 from the Southwestern Cooperative Educational Laboratory, 229 Truman, N.E., Albuquerque, NM 87108.

Preparing for Affirmative Action: A Manual for Practical Training is a workbook of exercises for training in the area of equal employment. Review set available for $10, from Garrett Park Press, Garrett Park, MD 20896.

Women's Organizations and Leaders Directory - 1982 is an international guide to the women's movement with over 25,000 listings (primarily organizations, government branches, etc.) and their leaders. Cost per book is $70 ($65 prepaid). Contact Today News Service, Inc., National Press Building, Washington, DC 20045.

BIBLIOGRAPHY AND DATA SOURCES

Admissions Testing Program of the College Entrance Board, College Board Publication Orders, Box 2815, Princeton, NJ 18541

College Bound Seniors, 1984, and 1985, copyright by College Board

American Anthropological Association, 1703 New Hampshire Avenue, N.W., Washington, DC 20009

1985 Survey of Departments, August 1985

American Assembly of Collegiate Schools of Business, 760 Office Parkway, Suite 50, Creve Cour, MO 63141

Stat Sheet, 1984

American Association of Colleges of Osteopathic Medicine, 4720 Montgomery Lane, Bethesda, MD 20814

Annual Statistical Report, 1981; 1982; 1983 and 1984

Fall Enrollments Questionnaire 1974-77

Personal Communication, December 1985

American Association of Colleges of Pharmacy, 4630 Montgomery Avenue, Suite 201, Bethesda, MD 20814

Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1976 through Fall 1984

Enrollment Report on Graduate Degree Programs in Pharmacy, Fall 1984

Graduate Enrollment Report, Fall 1973 through Fall 1983

Graduate Study in Member Colleges, 1974-75

Report of Degrees Conferred by Schools and Colleges of Pharmacy, 1975-76 thru 1983-84

Report of Enrollment in Schools and Colleges of Pharmacy, 1973-74

The Status of Women in Pharmaceutical Education, by Christopher A. Rodowskas, Jr.

American Association of Colleges of Podiatric Medicine, 6110 Executive Blvd., Suite 204, Rochville, MD 20852

Journal of Podiatric Medical Education, Vol. 12, No. 1, Winter 1981

Annual Report Summary, 1984-85

Personal Communication, December 1985

American Association of Dental Schools, 1619 Massachusetts Avenue, N.W., Washington, DC 20036
American Dental Association, Council on Dental Education, 211 E. Chicago Avenue, Chicago, IL 60611

Annual Report Dental Education Series, 1973-74 through 1984-85

Dental Faculty Information; Suppl. to Annual Report on Dental Education Series, 1976-77 through 1981-82

Personal communication, April 1983; June 1984

Trend Analysis, Supplement 11 to the Annual Report 84/85 Dental Education

American Bar Association, 1155 East 60th Street, Chicago, IL 60637

A Review of Legal Education in the United States - Fall 1977; Fall 1978; Fall 1979; Fall 1980; Fall 1981; Fall 1982; Fall 1983; and Fall 1984 - Law Schools and Bar Admission Requirements, Section of Legal Education and Admission to the Bar, copyright by A.B.A.

American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036

Committee on Professional Training, Personal Communication

Professionals in Chemistry 1979-80, March 1981; 1981-82, March 1983; and 1983-84, July 1985

Report of the Women Chemists Committee, 1982-83

Salaries 1981, July 1981; 1982, June 1982; 1983, June 1983; Salaries 1985, October 1985

Women Chemists 1980, September 1981

1976; and 1978; Report of Chemists' Salaries and Employment Status, July 1976; June 1978;

American Council on Education, One Dupont Circle, N.W., Washington, DC 20036

The American Freshman: National Norms for Fall 1971 and Fall 1972, ACE Research Reports, Vol. 6, No. 6, 1971 and Vol. 7, No. 5, 1972

1980 Fact Book for Academic Administrators

"Getting to the Top - Women CEOs in Higher Education," by Judy Touchton, Comment, May 1984, Office of Women in Higher Education; and personal communication, September 1985

American Council on Education/Office of Research and Cooperative Institutional Research Program, University of California at Los Angeles, Graduate School of Education, 405 Hilgard Avenue, Los Angeles, CA 90024

The American Freshman: National Norms for Fall 1973 through 1984, Office of Research and Cooperative Institutional Research Program, University of California at Los Angeles

American Economics Association, 1313 - 21st Avenue, Nashville, TN 37212

Report of the Committee on the Status of Women in the Economics Profession, January 1982; and May 1984

American Geological Institute, 4220 King Street, Alexandria, VA 22302

"Student Enrollment 1972-73," Geotimes, October 1973

Student Enrollment in Geoscience Departments 1975-76 through 1981-83, Series

Unpublished Data

American Institute of Architects, 1735 New York Avenue, N.W., Washington DC 20006

Personal communication, December 1985

American Institute of Certified Public Accountants, 1211 Avenue of the Americas, New York, NY 10036

Minority Recruitment and Equal Opportunity Committee 1981 Report, 1982 Report, 1983 Report, and 1984 Report by Sharon L. Donahue

American Institute of Physics, 335 East 45th Street, New York, NY 10017

Enrollments and Degrees, R-151.11, May 1974; R-151-13, May 1976; R-151.15, April 1978; R-151-17, March 1980; R-151.18, February 1981; R-151.20, February 1983; R-151.21, March 1984; R-151.22, June 1985

Graduate Student Survey, AIP Pub. No. R-207.11, February 1979; R-207.12, June 1980; R-207.13, May 1981; R-207.14, May 1982; R-207.16, 1984; and R-207.17, September 1985

American Mathematical Society, Box 6248, Providence, RI 02904

Notices, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 28, No. 2, November 1981 Vol. 29, No. 7, Issue 221, November 1982; Vol. 30, No. 7, Issue 229, November 1983; Vol. 31, No. 7, November 1984

"Report on the 1983 Survey of New Doctorates," Notices, Vol. 30, No. 7, November 1983; and "Report on the 1984 Survey of New Doctorates," by Donald C. Rung, Notices, Vol. 31, No. 7, November 1984

American Medical Association, 535 N. Dearborn Street, Chicago, IL 60610

Journal of the American Medical Association, Vol. 234, No. 13, December 29, 1975; Vol. 238, No. 26, December 26, 1977; Vol. 240, No. 26, December 20, 1978; Vol 243, No. 9, March 1980; Vol. 246, No. 25, December 1981; Vol. 248, No. 24, December 24/31, 1982, and Vol. 250, No. 12, September 23/30, 1983, copyright by AMA

American Nurses Association, 2420 Pershing Road, Kansas City, MO 64108

Facts About Nursing '84-85, 1985

American Optometric Association, 600 Maryland Avenue, S.W., Washington, DC 20002

Surveys conducted by the Council on Optometric Education

American Podiatry Association, 20 Chevy Chase Circle, N.W., Washington, DC 20015

Personal communication, 1985

American Physical Society, 335 East 45th Street, New York, NY 10017

CSWP Gazette, Issue No. 9, 1 March 1983, Committee on the Status of Women in Physics

American Political Science Association, 1527 New Hampshire Avenue, N.W., Washington, DC 20036

"Black Political Scientists: Where Are the New Ph.Ds?," by Maurice Woolard and Michael B. Preston, PS Winter 1985

"Finding Jobs: Placement of Political Scientists 1983-84," by Robert J-P. Hauck, PS Winter, 1985

"Ph.D. Enrollments Continue to Decline," by Robert J-P. Hauck, PS, Winter 1985

"Political Science Degrees Awarded: An Update," by Robert J-P. Hauck, PS, Winter 1984

American Psychological Association, 1200 - 17th Street, N.W., Washington, DC 20036

"Census of Psychological Personnel: 1983," American Psychologist, December 1985

1984 Doctorate Employment Survey, Preliminary Report

Summary Report of 1984-85 Survey of Graduate Departments of Psychology, June 1985

American Sociological Association, 1772 N Street, N.W., Washington, DC 20036

ASA Footnotes, December 1982

American Veterinary Medical Association/Association of American Veterinary Medical Colleges
1522 K Street, N.W., Suite 828, Washington, DC 20005

Personal Communication, November 1980, January 1982; April 1983; June 1984; December 1985

Association of American Medical Colleges, One Dupont Circle, N.W., Washington DC 20036

Fact Sheets, February 28, 1985 and October 18, 1985; New Releases, 10/26/84 and 10/28/85

"Medical Student Enrollment," 1971-72 through 1975-76, Journal of Medical Education, Vol. 51, February 1976; Vol. 52, February 1977; Vol. 53, April 1978; Vol. 54, December 1978; and unpublished data

Association of Schools & Colleges of Optometry, 600 Maryland Avenue, S.W., Suite 410, Washington, DC 20024

Unpublished Data

Association of Schools of Public Health, 1015 Fifteenth Street, N.W., Suite 404, Washington DC 20005

Unpublished Data, 1984

Civil Service Commission, U.S. SEE **Office of Personnel Management, U.S.**

College Entrance Examination Board, Educational Testing Service (ETS), SEE **Admissions Testing Program**

Commerce, U.S. Department of, Bureau of the Census, Washington, DC 20233

Historical Statistics of the U.S.

1980 Census of Occupations, Special EEO File; and Supplementary Report, May 1981

Commission on Professionals in Science and Technology, SEE **Scientific Manpower Commission**

Education Commission of the States, 1860 Lincoln Street, Suite 300, Denver, CO 80295

The Third National Mathematics Assessment Results, Trends and Issues, National Assessement of Education Progress, Report 13-MA-01, April 1983

Education, U.S. Department of, National Center for Education Statistics, 400 Maryland Avenue, S.W. Washington, DC 20202

The Condition of Education, 1985 Edition, NCES 85-402

Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity and Sex, Academic Year 1982-83, Office for Civil Rights, Unpublished

"Degrees Awarded to Women," 1979

Digest of Education Statistics, 1981, NCES 81-400; 1982, NCES 82-407; 1983-84, NCES 83-407

Earned Degrees Conferred, Series 1947-48 through 1982-83

Fall Enrollment in Higher Education, 1978, NCES 79-317; 1980 NCES 82-323; 1982, unpublished; 1984, as published in the Chronicle of Higher Education, January 22, 1986

Fall Enrollment in Colleges and Universities 1980, NCES 82-323

High School and Beyond, Longitudinal Survey, First Follow-up; Second Follow-up, October 1985

Projections of Education Statistics to 1986-87, NCES 78-403; 1988-89, NCES 80-402; 1990-91, NCES 82-402-A and 1992-93, NCES 85-408

"Science and Math Education in American High Schools," NCES Bulletin 84-211b

Unpublished Data

Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine, and Law, 1969-70 through 1974-75, NCES 76-023

Energy, U.S. Department of, Washington, DC 20425

Nuclear Engineering Enrollments and Degrees, 1984, DOE/ER-016512, March 1985

Radiation Protection Enrollments and Degrees, 1984, DOE/ER-0193, March 1985

Engineering Manpower Commission, 415 Second Street, N.E., Suite 200, Washington, DC 20002

Engineering and Technology Degrees, 1969 through 1984 Series

Engineering and Technology Enrollments, 1969 through 1984 Series

Health and Human Services, U.S. Department of, Health Resources Administration, Washington DC 20201

Minorities and Women in the Health Fields, May 1974; DHEW Pub. No. (HRA) 76-22, September 1975; October 1978; 1980; 1982 Edition, DHPA Report No. 7-82, October 1981; 1984 Edition, (HRSA)HRS-DV 84-5, September 1984

The Registered Nurse Population, November 1980, 1983

Supply of Dentists, Optometrists, Pharmacists, and Veterinarians: 1950-2000, July 1983

Women in Health Careers, by Mary Jane Pennell and Shirlene Showell, DHEW No. HRA 75-55, June 1975

Personal Communication

Howard, Suzanne, Ph.D., Educational Consultant, 402 Tennessee Avenue, Alexandria, VA 22305

Fact Sheet on Women in Education Administration, September 1980

Institute of International Education, 809 United Nations Plaza, New York, NY 10017

Open Doors, 1985

Labor, U.S. Department of, Bureau of Labor Statistics, Washington, DC 20212

Current Population Survey, unpublished, 1986; and personal communication, January 1986

Monthly Labor Review, September 1982; February 1983; August 1983; March 1984; November 1985

Students, Graduates, and Dropouts, October 1980-82, Special Labor Force Report, Bulletin 2192, Dec. 1983

Minnesota, University of, Minneapolis, MN 55455

Images of Science, Science Assessment and Research Project, Minnesota Research and Evaluation Center, June 1983

National Academy of Sciences/National Research Council, 2101 Constitution Ave., N.W., Washington, DC 20418

Doctorates Awarded 1920 to 1971 by Subfield of Doctorate, Sex and Decade, March 1973

Doctorate Records File

Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, 1981

Science, Engineering and Humanities Doctorates in the U.S., 1981 Profile, 1982; 1983 Profile, 1984

Summary Report, Doctorate Recipients from United States Universities, 1972-84 Series

Women in Engineering, Medicine and Science by Vera Kistiakowsky, The Conference on Women in Science and Engineering, June 11-12, 1973

Women and Minority Ph.D.'s in the 1970's - A Data Book, 1977

National Center for Education Statistics, SEE **Education, U.S. Department of**

National Center for Health Statistics, Room 1-57, 3700 East West Highway, Hyattsville, MD 20782

Personal Communication

National Education Association, Office of Research, 1201 - 16th Street, N.W., Washington, DC 20036

Estimates of School Statistics, 1980-81, 1981-83, 1982-83, 1983-84 and 1984-85

National League for Nursing, 10 Columbus Circle, New York, NY 10019

Nursing Data Book 1983-84, Pub. 19-1954, 1984

National Science Foundation, 1800 G Street, N.W., Washington, DC 20550

Academic Science, Graduate Enrollment and Support, Fall 1980, Detailed Statistical Tables, NSF 81-330, 1981; Fall 1981, NSF 83-305; Fall 1982, NSF 84-306

Academic Science/Engineering: Graduate Enrollment and Support, Fall 1983, Detailed Statistical Tables, NSF 85-300; and Fall 1984, unpublished

Academic Science: Scientists and Engineers, January 1980, NSF 81-307; January 1981, NSF 82-305; January 1982, NSF 83-311; January 1983, NSF 84-309

Academic Science/Engineering: Scientists and Engineers, January 1984, NSF 85-316; and January 1985, unpublished

Characteristics of Doctoral Scientists and Engineers in the United States: 1973-83 Series

Characteristics of Recent Science/Engineering Graduates: 1982, Detailed Statistical Tables, NSF 84-318; 1984, unpublished

Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, September 1981

Report of the 1977 National Survey of Science, Mathematics, and Social Studies Education, SE-78-72, reprint from Science Education Databook SE-80-3

Science and Engineering Personnel: A National Overview, NSF 85-302, December 1984

U.S. Scientists and Engineers, 1980, NSF 82-314; 1982, NSF 84-321

Women and Minorities in Science and Engineering, January 1984, NSF 86-301, January 1986

National Science Teachers Association, 1742 Connecticut Avenue, N.W., Washington, DC 20009

1985-86 Survey of Science and Math Teachers, unpublished

Office of Personnel Management, U.S., Washington, DC 20415

Federal Civilian Workforce Statistics, Affirmative Employment Statistics, September 30, 1984

Scientific Manpower Commission, 1500 Massachusetts Avenue, N.W., Suite 831 Washington, DC 20005

The Technological Marketplace: Supply and Demand for Scientists and Engineers, May 1985

Women's College Coalition, 1725 K Street, N.W., Washington, DC 20006

Profile of Women's College Presidents, December 1984

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